

January 30, 2007

Mr. Robert Boggs Department of Toxic Substances Control 700 Heinz Avenue, Suite 200 Berkeley, CA 94710-2737

Subject: Draft Battery Crosby Road Construction Report, Addendum to Construction

Completion Report, Baker Beach Disturbed Areas 3 and 4.

Presidio of San Francisco

Dear Mr. Boggs:

Attached please find one copy of the *Draft Battery Crosby Road Construction Report, Addendum to Construction Completion Report, Baker Beach Disturbed Areas 3 and 4 dated January 2007*, prepared by Treadwell & Rollo for the Presidio Trust (Trust). This report summarizes the reconstruction of Battery Crosby Road following remedial excavation activities performed at former Baker Beach Disturbed Area 3 (BBDA3) located in the Presidio of San Francisco, California. This report has been prepared as an addendum to the Trust's Construction Completion Report, Baker Beach Disturbed Areas 3 and 4 (Treadwell & Rollo, 2005) dated August 2005.

Please feel free to call me at 415-561-4259 if you have any questions and/or comments.

Sincerely,

Craig Cooper

Environmental Remediation Manager

Enclosure: Draft Battery Crosby Road Construction Report, Addendum to Construction

Completion Report, Baker Beach Disturbed Areas 3 and 4 dated January 2007

cc with enclosures: Devender Narala, RWQCB

Brian Ullensvang, NPS Doug Kern, RAB

Mark Youngkin, RAB (without enclosure)



DRAFT BATTERY CROSBY ROAD CONSTRUCTION REPORT ADDENDUM TO CONSTRUCTION COMPLETION REPORT BAKER BEACH DISTURBED AREAS 3 AND 4

Prepared for:

The Presidio Trust 34 Graham Street, P.O. Box 29052 San Francisco, CA 94129-0052 415/561-5300 fax 415/561-5315

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January 2007

DORINDA SHIPMAN NO. 215

CERTIFIED HYDROGEOLOGIS

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BATTERY CROSBY ROAD CONSTRUCTION REPORT ADDENDUM TO CONSTRUCTION COMPLETION REPORT BAKER BEACH DISTURBED AREAS 3 AND 4

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BATTERY CROSBY ROAD CONSTRUCTION REPORT ADDENDUM TO CONSTRUCTION COMPLETION REPORT BAKER BEACH DISTURBED AREAS 3 AND 4

List of Acronyms and Abbreviations

ABS Acrylonitrile Butadiene Styrene
ADA Americans with Disabilities Act

Army United States Army

BBDA 3 Baker Beach Disturbed Area 3

COCs contaminants of concern
CMP corrugated metal pipe

Design Drawings BBDA 3 Road Improvement Plan

DI Storm drain inlet

DTSC California Environmental Protection Agency, Department of Toxic

Substances Control

HASP Health & Safety Plan

NAD27 North American Datum of 1927

NAVD88 North American Vertical Datum of 1988

NPS National Park Service

Ox Mountain BFI Ox Mountain Sanitary Landfill

Perf-Ex Performance Excavators, Inc.

Presidio The Presidio of San Francisco

RAP Remedial Action Plan for Fill Site 6A and Baker Beach Disturbed

Areas 3 and 4

RWQCB California Regional Water Quality Control Board

RW Davis R.W. Davis & Associates

Treadwell & Rollo Treadwell & Rollo, Inc.

Trust The Presidio Trust

yd³ cubic yard

Work Plan Work Plan to Implement the Remedial Action Plan for Baker

Beach Disturbed Areas 3 and 4

1.0 INTRODUCTION

On behalf of The Presidio Trust (Trust), Treadwell & Rollo, Inc. (Treadwell & Rollo) has prepared this report, which summarizes the reconstruction of Battery Crosby Road following remedial excavation activities performed at former Baker Beach Disturbed Area 3 (BBDA 3) located in the Presidio of San Francisco, California (Figure 1). This report has been prepared as an addendum to the *Construction Completion Report*, *Baker Beach Disturbed Areas 3 and 4* (Treadwell & Rollo, 2005) dated August 2005, which documented the remedial action performed at BBDA 3. A detailed discussion of site history and previous investigation results is presented in the *Remedial Action Plan for Fill Site 6A and Baker Beach Disturbed Areas 3 and 4* (RAP) (Treadwell & Rollo, 2004a).

1.1 Background

The Presidio of San Francisco (Presidio) is located in the City of San Francisco, at the northern tip of the San Francisco peninsula. The Presidio occupies approximately 1,480 acres and is bound by San Francisco Bay on the north and the Pacific Ocean on the west. Densely populated residential areas of San Francisco border the Presidio to the south and east.

The Presidio was a United States Army (Army) installation from 1848 through 1994, serving as a mobilization and embarkation point during several overseas conflicts, a medical debarkation center, and a coastal defense for the San Francisco Bay area. Battery Crosby, constructed in 1899 to 1900 as part of the coastal defense system, housed a pair of 6-inch guns on disappearing carriages. Battery Crosby Road provided access to the battery (Figure 2). The road was constructed of locally derived compacted gravelly chert and gravelly, weathered serpentine typically used by the Army to surface roads within the Presidio. The cherty roadbed layers were placed on native dune sand.

Beginning in the 1930s, the Army began placing fill soils in the ravine adjacent to and west of the road. Over the years, the ravine was filled in with soil, wastes, and construction debris. By about 1979, the ravine had been filled and the access road had been straightened and re-aligned southward to a position where it cut diagonally across the former ravine (Figure 2 and Photo 1). The Trust and the National Park Service (NPS) completed implementing the remedial action for the removal of the waste fill material that was BBDA 3 in 2005. The waste fill that supported the access road was removed during the cleanup (Photos 2 through 4).

In June 2004, prior to remediation at the Site, the Trust excavated exploratory test pits on the upper bench area of BBDA 3 to verify and delineate the limits of the historical Battery Crosby Road. Historical aerial photographs had shown that over time, the Battery Crosby Road alignment was modified (Figure 2). As presented in the *Technical Memorandum: Historical Battery Crosby Road and Lead Exploratory Test Pit Excavation Observations and Results* (Treadwell & Rollo, 2004d), the presence of a chert road surface was observed at depths between

1 and 3 feet below the pre-remediation ground surface. As a requirement of the NPS 5X project review, investigation, documentation, and preservation of the historical Battery Crosby Road was conducted throughout the remedial construction. The remedial work was coordinated with NPS archeologist, Mr. Leo Barker.

1.2 Remedial Action

A "clean closure" remedial action was selected in the RAP and implemented at BBDA 3 as a final, permanent remedy for the site. The work was performed in accordance with the *Work Plan to Implement the Remedial Action Plan for Baker Beach Disturbed Areas 3 and 4* (Work Plan) (Treadwell & Rollo, 2004c), which outlined the technical scope of work required to implement the recommended remedial alternative for BBDA 3 described in the RAP. The *Construction Plans and Specifications* (Minshew Engineering and Treadwell & Rollo, 2004), which included the *Construction Quality Assurance (CQA) Plan* for the project, were prepared concurrently with the Work Plan and the *Slope Stability Evaluation Report for Baker Beach Disturbed Area 3* (Treadwell & Rollo, 2004b). The remediation documents were reviewed and approved by the California Environmental Protection Agency. Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board (RWQCB).

As presented in the *Construction Completion Report*, between 1 July 2004 and 13 January 2005, approximately 57,595 tons of waste material was removed from BBDA 3 as part of the RAP implementation. The waste materials removed consisted of non-native fill materials (artificial fill soils, tree stumps and wood waste, construction debris, and municipal waste).

During the remedial activities, Treadwell & Rollo supervised and logged two trenches to identify the limits of the chert roadbed (Treadwell & Rollo, 2004d). The thickness of the chert roadbed varied from a thin veneer to approximately 3 feet thick. The apparent width of the roadway was approximately 50 feet. The differences observed in the roadbed construction were attributed to the trenches exposing two separate roadways: the original pre-1958 road alignment and the newer 1958-1973 roadway alignment (Figure 2).

As excavation continued, the eastern portion of the Battery Crosby Road was narrowed to a width of 20 feet to match the older, pre-1958 dimensions. The excess chert from the narrowing work was excavated, exposing the underlying dune sand, and was stockpiled separately for potential reuse in resurfacing of the Battery Crosby Road following construction (Figure 3). On 17 November 2004, a four-point composite waste characterization sample (BB3COMPA through BB3COMPD composited as BB3 COMP) of the stockpiled chert was collected. The results of the analyses indicated no exceedances for the RAP site contaminants of concern (COCs). The analytical results for sample BB3 COMP are summarized in Table 1. The analytical laboratory reports are included in Appendix A.

During the soil confirmation sampling to document clean closure, a number of soil confirmation samples were collected from soil in or adjacent to the chert roadway. Analytical results from three soil confirmation samples (BB3EX146 through BB3EX148) detected exceedances for one or more COCs. Based on these results, a portion of the historical Battery Crosby roadway was excavated and removed. Once overexcavation was completed, the area was re-sampled. The results from subsequent sampling indicated that the COC concentrations were below cleanup levels (Treadwell & Rollo, 2005).

Based on the remedial activities conducted, field observations, established cleanup levels, and a review and evaluation of the soil confirmation sampling results, BBDA 3 was recommended for construction completion in the *Construction Completion Report*. Site groundwater and seep monitoring implemented per the RAP will continue for three years as part of the Presidio-wide Groundwater Monitoring Program. The data will then be reviewed to determine whether applicable cleanup levels have been achieved and monitoring is considered complete.

2.0 ROAD CONSTRUCTION ACTIVITIES

Because Battery Crosby is located in Area A of the Presidio, NPS is responsible for specifying and approving the post-remediation configuration of the access road. Between 6 December 2004 and 14 November 2005, the Trust prepared design drawings for the construction of Battery Crosby Road. On 23 November 2005, the NPS submitted to the Trust written concurrence of the *BBDA 3 Road Improvement Plan* (Design Drawings) (Minshew Engineering and Treadwell & Rollo, 2005). The road construction activities were conducted in general accordance with the *Construction Plans and Specifications* and Design Drawings. BBDA 3 road realignment construction activities were conducted between 7 December 2005 and 23 February 2006. Table 2 presents a timeline for the construction of Battery Crosby Road, which are described in detail below.

2.1 General Activities

The Trust contracted with Performance Excavators, Inc. (Perf-Ex) of San Rafael, California, to provide construction services including earthmoving and road construction activities. Treadwell & Rollo and Minshew Engineering performed construction oversight and quality assurance services, respectively, and Treadwell & Rollo performed field density testing of compacted soil.

2.1.1 Health & Safety

The Health & Safety Plan (HASP) followed for the road construction activities was the same HASP used for the remediation project issued by Perf-Ex on 5 May 2004. The HASP included the information pertaining to potential and identified hazards and protocols necessary to protect worker and public safety during the project.

2.1.2 Surveying

Surveying was conducted prior to construction of the proposed road alignment and at the completion of the final road realignment. Perf-Ex contracted R.W. Davis & Associates (RW Davis), a California-licensed land surveyor to provide the surveying services. The horizontal coordinates are based on North American Datum of 1927 (NAD27), Zone 3. The elevations are referenced to the North American Vertical Datum of 1988 (NAVD88).

RW Davis performed the pre-construction survey for the site on 13 December 2005. The pre-construction survey included the establishment the roadway center and boundary alignments and grade elevation. The post-excavation "as-built" survey, including site topography and improvements (roadway alignment, storm drain outfalls, fence lines, etc.) at BBDA 3 was

conducted following grading between 23 February 2006 and 1 March 2006. The BBDA 3 final survey results are presented in Appendix B.

2.2 Battery Crosby Road Realignment

Perf-Ex mobilized heavy equipment to BBDA 3 on 13 December 2005 to provide excavating, earth moving, and road construction activities. The primary excavation activities were performed using a Link-Belt excavator, Caterpillar D5 dozer, and Caterpillar 966G loader.

The design for the new road alignment complies with the Americans with Disabilities Act (ADA) for public access, as required. One main consequence of ADA compliance was the relocation of the entrance for the road approximately 50 feet to the south of the historical entrance (Figure 4). The relocation of the roadway entrance was necessary to decrease the overall grade of the roadway to within ADA specifications (<8.3% maximum).

2.2.1 Excavated Wastes and Earth Fill Materials

Excavation and removal of onsite materials was required during the construction the new road. Waste material excavated during road construction at the site included:

- Green waste (surface brush and soil mix) and trash for disposal;
- Soil for Class III disposal; and
- Chert fill material, salvaged for potential future use.

Prior to the start of construction activities, Perf-Ex conducted waste characterization sampling to establish a waste profile of the material for the disposal facilities. The waste material excavated was generated during scarifying of the surface vegetation and high organic-content soil prior to placement of imported sand for the construction of the new road entrance (Photo 5).

Waste materials for this project were transported to the following facilities for the indicated type of disposition.

- West Contra Costa Landfill, Richmond, California green waste and debris/trash; and
- BFI Ox Mountain Sanitary Landfill (Ox Mountain), Half Moon Bay, California
 Class III soil.

Additional chert fill material was excavated during the removal of the historical Battery Crosby Road entrance. The chert fill material from the historical entrance was salvaged and was stockpiled at an offsite location within the Presidio for potential future use.

A description of the waste types and documented volumes in each category disposed at BBDA 3 are presented in Table 3. Copies of the trucking weight tickets are included in Appendix C.

In accordance with the Work Plan and *Construction Plan and Specifications*, imported construction material was approved by the Trust prior to delivery to the site. Three types of materials were used to construct the new Battery Crosby Road:

- Dune sand provided by the Trust;
- Class II virgin aggregate base rock supplied from Dutra Quarry in Richmond, California; and
- Onsite derived chert road surface material, salvaged from the historical Battery Crosby Road during site remediation activities.

The dune sand material provided by the Trust was supplied from a stockpiled source within the Presidio. This dune sand was used to construct the new Battery Crosby Road entrance and locally as road fill for the new roadway alignment.

In mid-2004, the Trust acquired approximately 40,000 tons of dune sand from a site located in Golden Gate Park. The material was previously sampled and analyzed to document that it was un-impacted and acceptable for use as Presidio backfill material. A copy of the *Draft Final Letter Report, Sampling and Testing, Imported Dune Sand* dated 30 August 2004 prepared by Geologica Inc., presenting the sampling results is included as Appendix A.

Prior to the start of construction activities, Perf-Ex conducted material characterization sampling of the quarried Class II aggregate base rock to establish the material as an acceptable virgin source. The Class II aggregate road base was used as the lower portion of the new roadway section. The analytical results were reviewed and accepted by the Trust. A copy of the laboratory analytical results for the Class II aggregate base rock material is included in Appendix A.

The top surface material used to complete the new Battery Crosby Road is chert road material salvaged from portions of the historical road excavation activities. As noted in Section 1.2, the salvaged chert material was sampled and approved for re-use. The analytical laboratory reports are included in Appendix A.

The excavated and imported materials were loaded out or delivered by Perf-Ex and transported to/from the appropriate landfill/source using 10-wheel dump trucks. The incoming and outgoing truck traffic pattern was in accordance with the authorized haul routes presented in the RAP and Work Plan. After a truck was loaded onsite, flagmen would halt traffic (vehicle, bicycle, and pedestrian) in both directions on Lincoln Boulevard. The loaded trucks containing waste materials would depart the site and exit the Presidio on US Highway 101. The road and pedestrian footpath were open at all other times, including evenings, weekends, and workdays

during which no hauling activities occurred. Public access to Baker Beach was maintained throughout the project.

2.2.2 Battery Crosby Road Re-alignment Construction

As detailed below, the construction of Battery Crosby Road consisted of three phases:

- Construction of the new entrance and removal of the former historical entrance;
- Construction of the new roadway alignment; and
- Re-vegetation of the new slope.

2.2.2.1 New Battery Crosby Road Entrance

As previously noted to be compliant with ADA requirements, the entrance for the access road needed to be re-located approximately 50 feet south of the historical entrance (Figure 4). On 13 December 2006, Perf-Ex began to scarify the surface vegetation and excavate and remove soil containing high organic content. Approximately 64 cubic yards (yd³) of green waste (surface brush and vegetation mixed with soil) and trash (spent wattles, silt fences, debris) were excavated and/or removed prior to the construction of the new road entrance (Table 3). Additionally, approximately 27 yd³ of organic-rich soil was excavated and disposed of as Class III waste at Ox Mountain (Table 3).

Prior to earth fill placement, two storm drain outfalls that discharged runoff from Lincoln Boulevard within the new entrance footprint had to be extended (Figure 4). The southern-most storm drain outfall, draining northbound Lincoln Boulevard, was extended using approximately 40 feet of 12-inch diameter, corrugated metal pipe (CMP) (Photo 6).

The outfall for the southbound Lincoln Boulevard was found to be plugged with debris and positioned at an elevation that would have interfered with the construction of the new entrance. The Trust decided to completely remove, replace, and extend the existing storm drain from the Lincoln Boulevard drain inlet (DI) (Photo 7). Upon excavating the old storm drain pipe it was observed that a portion of the drain line was constructed with transite pipe. Transite pipe is an asbestos-cement manufactured pipe (Photo 8). The 10-foot section of transite pipe was removed, sealed in plastic sheeting, labeled, and placed with the Trust asbestos abatement program's stored wastes located within the Presidio at Central Magazine for appropriate disposal. The new storm drain replacement for the southbound Lincoln Boulevard was constructed with approximately 90 feet of 12-inch diameter CMP. Following the construction of the storm drain extensions, import dune sand fill was placed over the pipes and compacted (Photo 9).

The relocation of the roadway entrance required a soil fill wedge be placed and compacted to raise the roadway grades to meet the ADA requirements. To add strength to the fill wedge, layers of bi-axial geogrid (Marfi 3XT) were placed at a vertical spacing of approximately 18-inches

within the imported dune sand fill (Photo 10). Each lift was roller compacted to at least 95% relative compaction¹. The fill placement was observed by Treadwell & Rollo personnel and field density tests were conducted periodically. A tabular summary of the compaction test results, and compaction curves, are presented in Appendix D. The new entrance for Battery Crosby Road was constructed with the geogrid reinforced dune sand to a maximum thickness of 8 vertical feet above the original ground surface (Photo 11). A total of approximately 510 yd³ of imported dune sand fill was placed during the construction of the new Battery Crosby Road entrance and roadway.

To reduce erosion of the newly placed fill adjacent to the new roadway entrance, it was blanketed with a designed slope erosion Geocell system (Figure 4). The Geocell slope protection consists of backfilled, anchored panels of cellular, high density polyethylene. Each nominally-expanded panel is approximately 8.4 feet wide by 27.4 feet long with individual cell dimensions of approximately 10- by 8-inches wide and 8-inches deep. Each panel is anchored from the top of the slope using a buried, 4-inch diameter, Schedule 40, steel pipe "deadman" (Photo 12). The deadman was embedded at least 3 feet beneath the final roadway grade. The panels are suspended from the buried deadman by nylon web tendons. The design for this slope application required two tendons for each panel. The expanded Geocell panel was secured to the tendons using polymer j-hook stops (Photo 13). The j-hook was secured to the tendon using a Moorehitch thereby preventing the up-slope cell wall from advancing further down slope. The j-hooks were installed along each tendon, within every third cell for the length of panel (Photo 14). To install the panels along the curved slope constructed for the entrance, special attention was paid to each panel installation orientation. Each panel on the curve was compressed laterally at the top of the radius of slope so that the resulting shape of the panel was tapered (Photo 15).

Once the panels were secured to the tendons and properly positioned, the cells were backfilled with imported dune sand (Photo 16). The cells were overfilled approximately 10- to 18-inches to allow for settling and compaction. The slope was completed before being hand raked prior to revegetation (Photo 17).

2.2.2.2 Removal of the Historical Battery Crosby Road Entrance

As construction of the entrance for the new road proceeded, excavation and removal of the historical entrance was performed. The former entry road surface was removed to allow the new road surface grade to be constructed. Additionally, the design plans required a minimum of two feet of dune sand cover in the area of the former historical entrance.

A ramp of imported Class II aggregate base rock had been placed at the historical entrance during the remedial excavation work to allow semi-truck access to the site for hauling away

Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material as determined by the ASTM D1557-00 laboratory compaction procedure.

wastes. The initial plan had been to reuse the ramp material for roadway subgrade material. Therefore on 28 January 2005, a four-point composite waste characterization sample (COMP BB3-RA\B) of the ramp material was collected (BB3-RA\BA through BB3-RA\BD) (Figure 3). The hydrocarbon concentrations reported for the sample were determined to exceed applicable site criteria. Therefore, the Class II aggregate base rock ramp was excavated and removed from the site. The analytical laboratory reports from the ramp sampling are included in Appendix A.

Following the removal of the temporary truck ramp, the chert road material in the area of the historical entrance was removed (Photo 18). To achieve the required dune sand fill depth, additional chert road material was removed. Localized areas of chert road material in excess of four feet thick were observed during excavation on the former historical entrance. The chert road material excavated during removal of the former historical entrance was stockpiled offsite at a storage location within the Presidio for potential future reuse. Approximately 270 yd³ of chert material were removed from BBDA 3 (Table 3).

2.2.2.3 Roadway Construction

As the new entrance construction neared completion, work on constructing the new road began (Photo 19). Because of the previously described remediation and soil off-haul, almost the entire length of the new roadway had to be re-constructed. A single remnant of the historical Battery Crosby Road roadway remained after the remedial work and was therefore kept intact (Figure 4).

In accordance with the Design Drawings, a roadway drainage V-ditch, collection DI, and storm drain pipe and outfall were installed within the upper 250 feet of the road. This system, along with the designed 2% camber of the road towards the V-ditch was installed to provide erosion control by diverting surface water runoff from the roadway away from the ravine slopes.

The V-ditch was constructed along the eastern edge of the roadway. It extends from the new Battery Crosby Road entrance to the new DI located at the westward turn in the road approximately 250 feet from the entrance (Figure 4). The V-ditch is lined with polypropylene fiber matrix geotextile (North American Green P300) (Photo 20). A buried storm drain pipe and outfall were installed to discharge runoff from the DI. The storm drain was constructed of approximately 85 feet of 12-inch diameter Acrylonitrile Butadiene Styrene (ABS) pipe. The storm drain outfall consists of two, 15-foot long laterals of 12-inch diameter perforated ABS pipe (Photos 21 and 22). The ends of the perforated pipes were capped.

The new road subgrade was re-constructed by placing up to 18-inches of imported dune sand to achieve the design subgrade elevation (Photo 23). The road fill was roller compacted and the relative compaction checked prior to the placement of geotextile fabric (MARAFI 600X) and roadway edge boards (Photo 24). A summary of the compaction testing results is included in Appendix D. With the edge boards installed, imported Class II aggregate base rock was placed and compacted to create the road base (Photo 25). Approximately 90 yd³ of Class II aggregate base rock was used to construct the road base of the new road (Table 3). The new road

base was graded to transition into the remaining section of the historical Battery Crosby Road (Photo 26). The roadway section was completed using a 3-inch layer of roller compacted chert material (Photo 27). Approximately 49 yd³ of chert material salvaged from the historical Battery Crosby Road (Section 1.2) was used to complete the roadway section and provide the final roadway surface.

Where the new road intersects with Lincoln Boulevard, the first 8 feet of road was completed by placing and compacting Class II aggregate base rock with an asphalt road surface (Photos 28 through 30). The pedestrian footpath along Lincoln Boulevard was repaired locally to remove rills. The footpath was backfilled with salvaged chert material graded to match the elevation of the asphalt entrance apron and to direct surface water runoff away from the roadway entrance (Photo 31). To prevent unauthorized vehicle access to Battery Crosby, the design drawings provided for the installation of wooden bollards at the intersection of Battery Crosby Road and Lincoln Boulevard (Figure 4). Three 3-foot tall, 8-inch diameter pressure treated wooden bollards were installed (Photo 32). The outer two bollards are fixed, concreted in place, while the center bollard is removable and secured with a lock and chain.

The final item for the road construction was the installation of post-and-cable fencing (Photo 33). A three-strand wire post-and-cable fence backed by galvanized wire mesh fencing was installed along the western edge of the road (Photo 34). The fence extends from the new entrance to Battery Crosby. A single gate opening was installed in the fence near Battery Crosby.

A second fence was constructed near the toe of the ravine and consists of approximately 50 feet of three-strand post-and-cable fence. (Figure 4). This fence is intended to discourage public access from the beach to the sensitive habitat of the ravine.

Variances from the approved Design Drawings are noted on the Revised As-Built Design Drawings which are included in Appendix B. One variance of the approved road design which is not included on the Revised As-Built Design Drawings is the elimination of the installation of post-and-cable fencing along the upper 100 feet of the eastern side of the new road. The installation of this section of fence was originally stipulated in the NPS road design concurrence letter dated 23 November 2005. A field decision was reached between Ms. Jennifer Yata, Trust Environmental Project Manager and Mr. Lewis Stringer, NPS Plant Specialist to omit the installation of this section of fencing. It was agreed, at the initiation of Mr. Stringer, that the area in the vicinity of the proposed fencing would be more esthetically pleasing and would facilitate planting and plant care if the fencing was not installed in this area.

On 23 February 2006, a field inspection site walk was attended by: Ms. Jennifer Yata, Trust Environmental Project Manager; Ms. Andrea Lucas and Mr. Lewis Stringer, NPS Natural Resource personnel; Mr. Michael Chamberlain, Treadwell & Rollo Site Geologist; Mr. Wendell Minshew, Minshew Engineering, Engineer of Record; and Mr. Clarence Cleaver, Perf-Ex Site Foreman.

2.2.2.4 Re-vegetation

Full native vegetation restoration planting at BBDA 3 is being performed by NPS personnel and volunteers (Photo 35). These activities are ongoing and will continue periodically as needed and at the discretion and direction of NPS.

3.0 SUMMARY AND CONCLUSIONS

Between 7 December 2005 and 23 February 2006, construction of the new access road for to Battery Crosby was performed. The construction of the re-aligned roadway followed the completion of the remedial action activities at BBDA 3. The new road provides an ADA compliant pathway for public access to Battery Crosby. The approved design required relocation of the historical entrance for Battery Crosby Road, such that a roadbed with a grade lowered to ADA compliant requirements could be constructed. Approximately 510 yd³ of imported dune sand, 90 yd³ of virgin quarried Class II aggregate base rock, and 49 yd³ of chert material salvaged from the historical Battery Crosby Road were used during the construction activities. In addition to the construction of the new roadway, other site improvements included a roadway drainage system and new post-and-cable fencing.

BBDA 3 has been previously recommended for remedial construction completion (Treadwell & Rollo, 2005). All construction activities at the site have now been completed. Groundwater and seep monitoring will continue per the RAP for three years as part of the Presidio-wide Groundwater Monitoring Program. The data will then be reviewed to determine whether applicable cleanup levels have been achieved and monitoring is considered complete.

4.0 REFERENCES

Erler & Kalinowski, Inc. (EKI), 2002. Development of Presidio-wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water. October.

Geologica, Inc., 2004. *Draft Final Letter Report, Sampling and Testing, Imported Dune Sand.* 30 August.

Minshew Engineering and Treadwell & Rollo, Inc, 2004. *Construction Plans and Specifications, Baker Beach Disturbed Areas 3 and 4.* May.

Minshew Engineering and Treadwell & Rollo, Inc., 2005. *BBDA 3 Road Improvement Plan.* 14 November.

Treadwell & Rollo, Inc. (Treadwell & Rollo), 2004a. *Remedial Action Plan for Fill Site 6A and Baker Beach Disturbed Areas 3 and 4*. March.

Treadwell & Rollo, 2004b. *Slope Stability Evaluation Report for Baker Beach Disturbed Area 3*. May.

Treadwell & Rollo, 2004c. Work Plan to Implement the Remedial Action Plan for Baker Beach Disturbed Areas 3 and 4. May.

Treadwell & Rollo, 2004d. *Technical Memorandum: Historical Battery Crosby Road and Lead Exploratory Test Pit Excavation Observations and Results.* March.

Treadwell & Rollo, 2005. Construction Completion Report for Baker Beach Disturbed Areas 3 and 4. August.

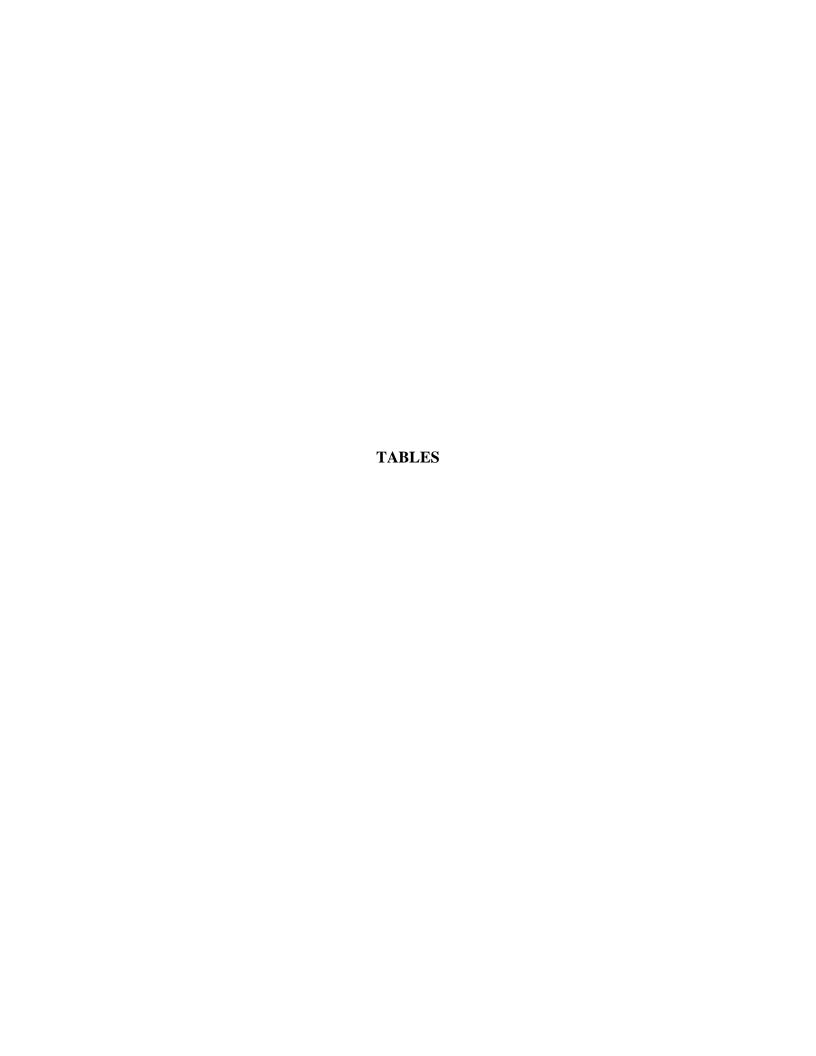


Table 1 **Analytical Results of Battery Crosby Road Construction Materials** Baker Beach Disturbed Area 3

Presidio of San Francisco, California

	Dune Sand Stockpile Composite Samples			Salvaged Chert Road Fill	Quarried Class II Aggregate Base rock	Soil Cleanup Level (mg/kg)			
Chemical Analyte	GA9SSCOMP501-504 (mg/kg)	DUP073004-GA9SSCOMP501-504 (mg/kg)	GA9SSCOMP505-508 (mg/kg)	BB3 COMP (mg/kg)	BB3 A/B COMP2 (mg/kg)	Residential - Serpentinite Ecological - Special Status ¹	Residential - Colma Ecological - Special Status ¹	Residential - Beach/Dune Ecological - Special Status ¹	Residential - Chert Ecological - Special Status ²
Inorganic Chemicals (Methods 6010/6020)									
Antimony				<2.4	<2.0	5.0	5.0	5.0	5.0
Arsenic				4.3	4.7	5.4	6.2	5.9	3.2
				390	190	320	320		900
Barium								320	
Beryllium				0.66	<0.5	10	10	10	10
Cadmium				0.69	0.95	1.9	0.8	1.7	1.7
Chromium (Cr(VI) & Cr(III))				46	6.1	1,700	140	120	41
Cobalt				17	5.8	170	21	20	37
Copper				110	0.5	85	49	43	360
Lead	1.8	1.6	1.6	22	9.0	160	160	160	160
Molybdenum				0.96	1.3	12	12	12	12
Nickel				61	14	4,500	110	70	71
Selenium				< 0.20	<2.0	0.5	0.5	0.75	0.5
Silver				< 0.20	< 0.99	2.0	2.0	2.0	2.0
Thallium				< 0.20	< 0.99	1.0	1.0	1.0	1.0
Vanadium				42	7.6	74	90	92	61
Zinc				58	42	160	60	66	120
			-	36	72	100	00	00	120
PCBs, Pesticides, and Herbicides (Methods 8081,									
8082 & 8150)									
PCBs (Aroclor 1254)	< 0.012	< 0.012	< 0.012	< 0.010		0.033	0.033	0.033	0.033
Aldrin	< 0.0017	< 0.0017	< 0.0018	< 0.0018	< 0.002	0.0039	0.0039	0.0039	0.0039
alpha-BHC	< 0.0017	< 0.0017	< 0.0018	< 0.0018	< 0.002	0.062	0.062	0.062	0.062
beta-BHC	< 0.0017	< 0.0017	< 0.0018	< 0.0018	< 0.002	0.062	0.062	0.062	0.062
delta-BHC	< 0.0017	< 0.0017	< 0.0018	< 0.0018	< 0.002	0.062	0.062	0.062	0.062
Chlordane*	< 0.0034	<0.0034	< 0.0036	0.0026 J	< 0.004	0.0090	0.0090	0.0090	0.0090
4,4'-DDD	< 0.0033	< 0.0034	< 0.0034	< 0.0036	< 0.002	0.049	0.049	0.049	0.049
4,4'-DDE	< 0.0033	<0.0034	< 0.0034	< 0.0036	< 0.002	0.098	0.098	0.098	0.098
4,4'-DDT	< 0.0033	< 0.0034	< 0.0034	0.0056	< 0.002	0.0082	0.0082	0.0082	0.0082
Dieldrin	< 0.0033	< 0.0034	< 0.0034	< 0.0036	< 0.002	0.030	0.030	0.030	0.030
Endosulfan	< 0.0033	< 0.0034	< 0.0034			1.1	1.1	1.1	1.1
Endosulfan Sulfate	< 0.0033	< 0.0034	< 0.0034	< 0.0036	< 0.002	1.1	1.1	1.1	1.1
Endrin	< 0.0033	<0.0034	< 0.0034	< 0.0036	< 0.002	0.004	0.004	0.004	0.004
gamma-BHC (Lindane)	< 0.0017	<0.0017	< 0.0018	0.0051	<0.002	0.010	0.010	0.010	0.010
Heptachlor	< 0.0017	<0.0017	< 0.0018	< 0.0018	<0.002	0.017	0.017	0.017	0.017
Heptachlor Epoxide	< 0.0017	< 0.0017	< 0.0018	< 0.0018	< 0.002	0.017	0.017	0.017	0.017
Methoxychlor	< 0.0017	< 0.0017	< 0.0018	< 0.018	< 0.002	0.44	0.44	0.44	0.44
Petroleum Hydrocarbons (Method 8015 Modified)									
TPH as gasoline (C ₇ - C ₁₂)	<1.0	< 0.97	<1.0			610	610	610	610
TPH as diesel (C_{12} - C_{24})	<1.0	<1.0	<1.0		7.4	700	700	700	700
TPH as fuel oil ($C_{12} - C_{24}$)					<50		980		
11 11 as tuei oii (C ₂₄ - C ₃₆)	<5.1	<5.1	<5.1		<20	980	980	980	980

Page 1 of 1 January 2007

mg/kg - milligrams per kilogram
-- Analysis Not Requested

^{*} Sum of the reported concentrations for alpha-Chlordane and gamma-Chlordane

Shading indicates target cleanup levels.

¹ Cleanup levels for soil are based on the most stringent of the values for protection of human health (recreational or residential land use), protection of ecological special status species and terrestrial receptors), and maintaining drinking water standards in groundwater (soils greater than 5 feet above groundwater). In the case of metals, if the background concentration for a particular lithology (Serpentinite, Colma, or Beach/Dune Sand, as noted) is greater than the most stringent cleanup level, then the background concentration applies as the cleanup level. Source: Table 7-2 (non-petroleum compounds) and Table 7-5 (petroleum hydrocarbons and constituents) in the Cleanup Levels Document (EKI, 2002).

² Cleanup levels for serpentinite, Colma, and beach/dune sand have been approved in the RAP (Treadwell & Rollo, 2004a). Cleanup levels for chert have been derived from the Clean Levels Document (EKI, 2002).

Table 2

Battery Crosby Road Construction Timeline

Baker Beach Disturbed Areas 3

Presidio of San Francisco, California

Action/Event						
Remedial Action Plan approved by DTSC.						
Notice to Proceed issued to Perf-Ex.						
Begin removing waste from slope of BBDA 3.						
First truck load waste out Class I to Buttonwillow.						
Graded Area 9 imported sand stockpile sampled (GA9SS-COMP501-504, GA9SS-505-508).						
Begin exposing historical Battery Crosby Rd.						
Excavate 2 trenches to map limits of historical Battery Crosby Rd.						
Salvaged chert stockpile sampled (BB3COMP).						
Excavate and remove section of historical Battery Crosby Rd. that failed						
cleanup criteria. DTSC, Trust, NPS, T&R walk site to verify confirmation sampling results and document site cleanup criteria met. Sampling complete.						
Load out last truck of waste material.						
Class II A/B entrance ramp sampled (COMP BB3-RA/B).						
Draft Construction Completion Report, Baker Beach Disturbed Areas 3 and 4, dated						
23 August 2005 submitted to DTSC for review.						
NPS Battery Crosby Rd. design concurrence.						
Battery Crosby Road Construction						
Pref-Ex prepares site for earth work.						
Perf-Ex mobilizes equipment and begins grubbing slope for new road entrance.						
RW Davis survey pre-construction roadway alignment and grade elevations.						
Begin import of sand for relocated road entrance connstruction. Dutra Quarry Class II A/B sampled (BB3A/B COMP2).						
Complete extending storm drain outfall pipe from Lincoln Avenue.						
New road entrance contruction with import sand and geogrid complete. Install new road drain invert, pipe and outfall.						
Begin placing import sand roadfill to sub-grade elevation.						
Set road edge boards and geotextile fabric.						
2-Jan-06 Set road edge boards and geotextile fabric. 16-Jan-06 Place import aggragate road base.						
n-06 Construct roadside drainage V-ditch.						
Begin installation of post-and-cable fence.						
Complete removal of the historical Battery Crosby Rd entrance and recontour footpath.						
Begin installation of Geocell slope protection.						
Complete Geocell installation.						
Begin final entrance apron and footpath construction.						
Perf-EX de-mobilizes last of heavy equipment.						
Site walk with Trust, NPS, T&R, and PerfEx.						

Page 1 of 1 January 2007

Table 3 Summary of Construction Materials and Waste Quantities Baker Beach Disturbed Area 3

Presidio of San Francisco, California

Material	Quantity (cubic yards)
Class II Aggragate Base Rock Import Remediation Work Truck Access Ramp Stockpiled Presidio	120 ¹
Green Waste / Trash Disposal West Contra Costa Landfill Richmond CA	64 ²
Class III Soil Disposal BFI Ox Mountain Sanitary Landfill Half Moon Bay, CA	27
Salvaged Chert Road Material Removed Historical Battery Crosby Road Entrance Stockpiled Presidio	270 ³
Quanity Removed from Site	481
Class II Aggragate Base Rock Import Dutra Quarry Richmond CA	90
Inported Dune Sand Graded Area 9 Stockpile Presidio	510 ³
Salvaged Chert Road Surface Material Historical Battery Crosby Road Presidio	49 ³
Quanity Imported to Site	649

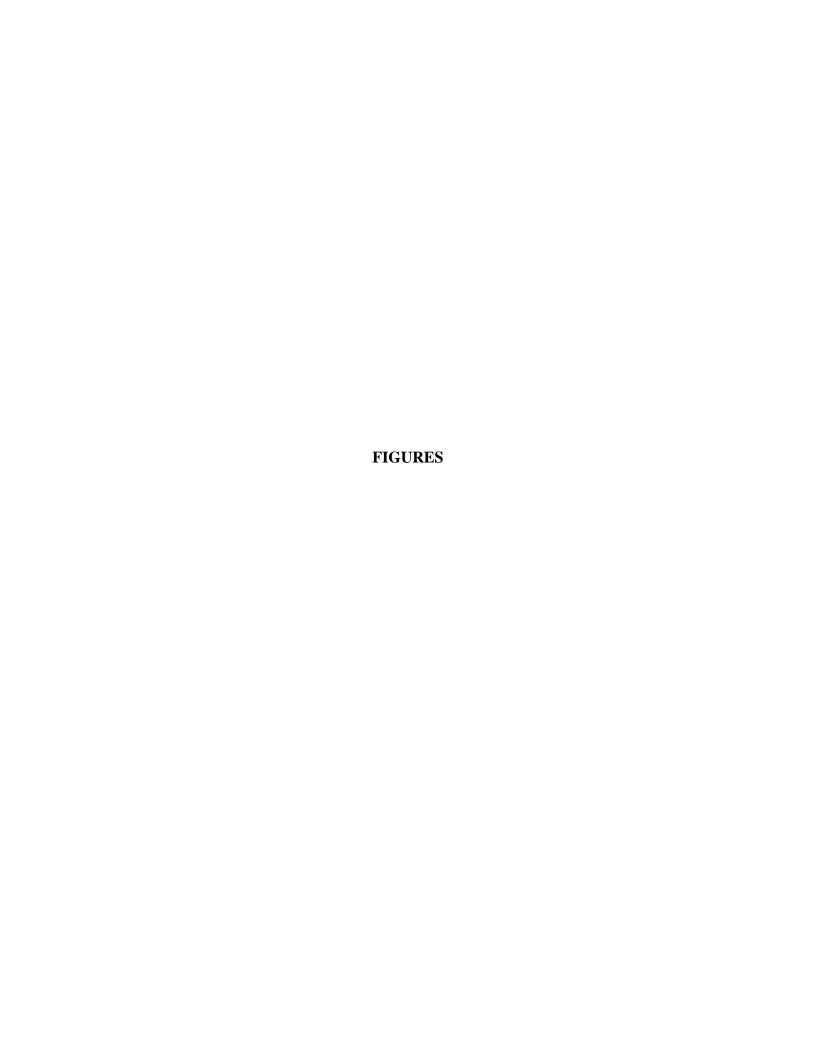
Notes

Page 1 of 1 January 2007

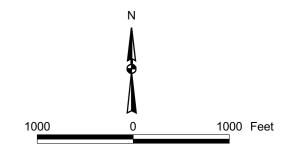
 $^{^1\,}$ Volume based on truck count using a conversion factor of 20 cubic yards per truck.

² Volume in cubic yards for waste stream is calculated by using a conversion factor of 1.3 (units of tons per cubic yard).

³ Volume based on truck count using a conversion factor of 10 cubic yards per truck.







LEGEND

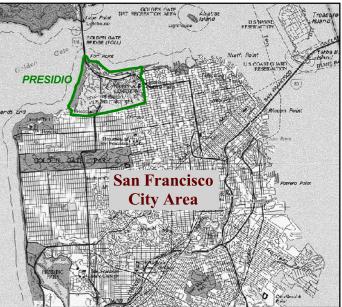
---- Area A and B Boundary

Approximate Site Boundary

Notes

Area A Stewardship by the National Park Service

Area B Stewardship by the Presidio Trust



SITE LOCATION MAP

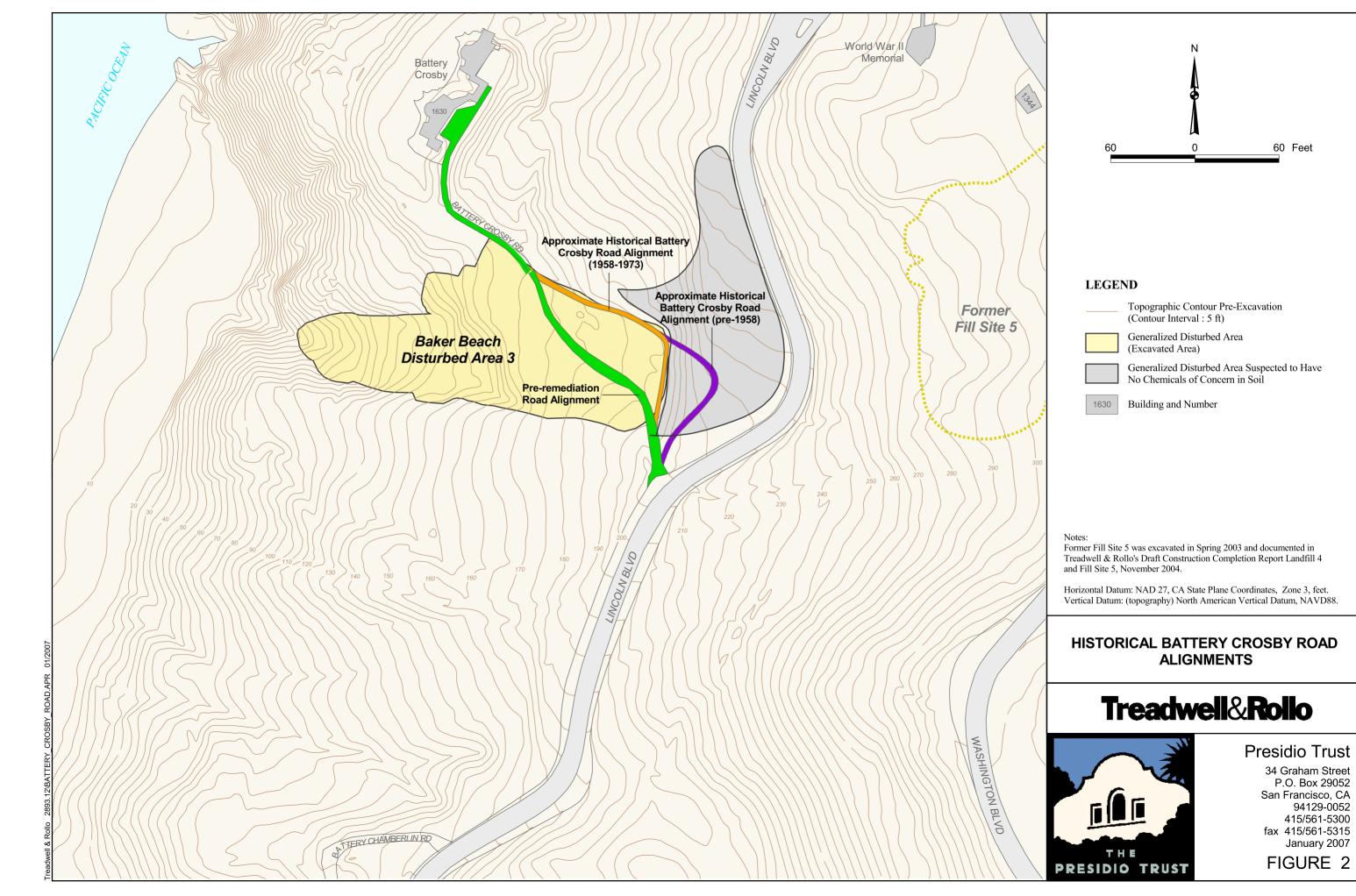
Treadwell&Rollo

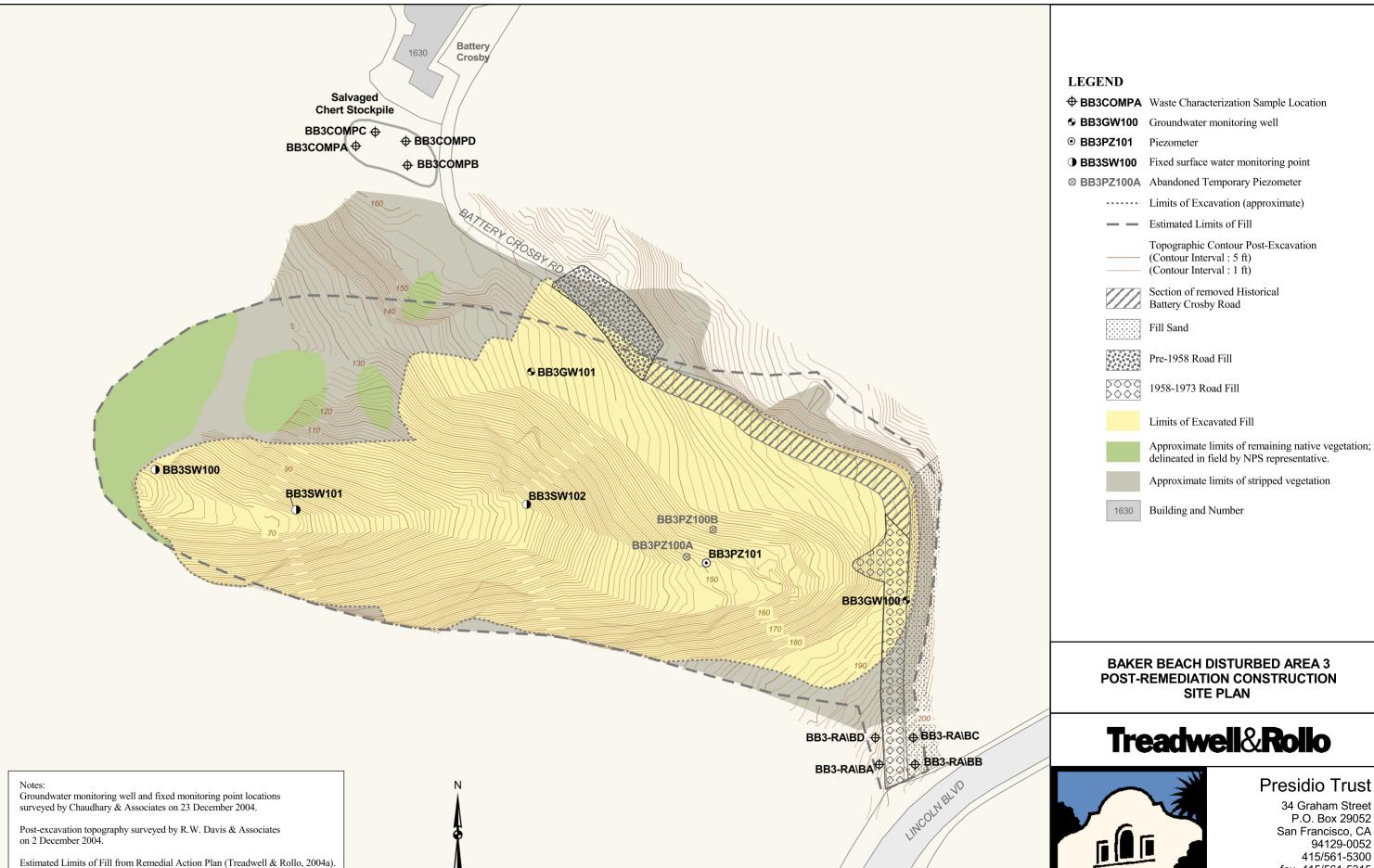


Presidio Trust

34 Graham Street P.O. Box 29052 San Francisco, CA 94129-0052 415/561-5300 fax 415/561-5315 January 2007

FIGURE 1





60 Feet

Horizontal Datum: NAD 27, CA State Plane Coordinates, Zone 3, feet.

Vertical Datum: (topography) NGVD 29.

delineated in field by NPS representative.

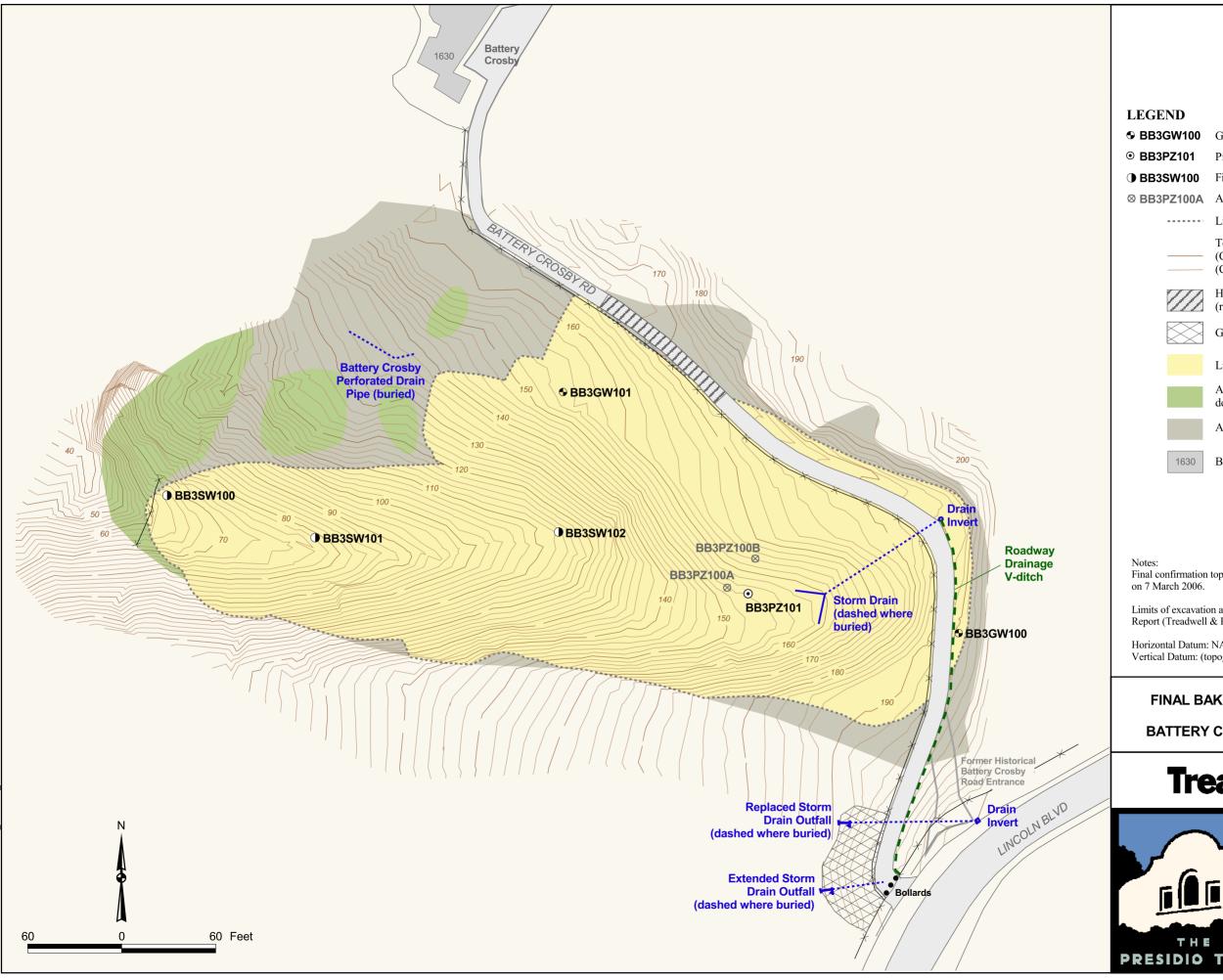
BAKER BEACH DISTURBED AREA 3



Presidio Trust

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FIGURE 3



Groundwater monitoring well

Piezometer

Fixed surface water monitoring point

Abandoned Temporary Piezometer

Limits of Excavation (approximate)

Topographic Contour Post-Excavation (Contour Interval : 10 ft)

(Contour Interval: 2 ft)

Historical Section of Battery Crosby Road (remained throughout construction)

Geocell Slope Protection

Limits of Excavated Fill

Approximate limits of remaining native vegetation; delineated in field by NPS representative.

Approximate limits of stripped vegetation

Building and Number

Final confirmation topography surveyed by R.W. Davis & Associates

Limits of excavation and vegetation from Construction Completion Report (Treadwell & Rollo, 2005).

Horizontal Datum: NAD 27, CA State Plane Coordinates, Zone 3, feet. Vertical Datum: (topography) NAVD88.

FINAL BAKER BEACH DISTURBED AREA 3 TOPOGRAPHY AND BATTERY CROSBY ROAD CONFIGURATION

Treadwell&Rollo



Presidio Trust

34 Graham Street P.O. Box 29052 San Francisco, CA 94129-0052 415/561-5300 fax 415/561-5315 January 2007 FIGURE 4

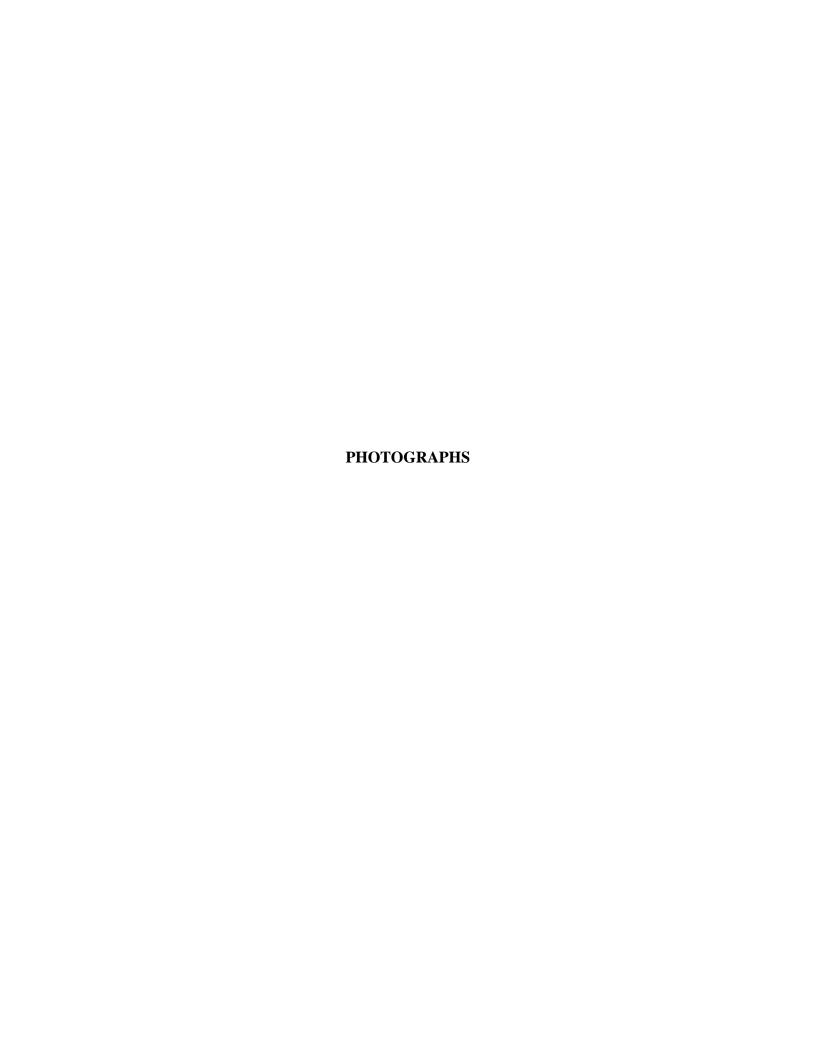




Photo 1: Battery Crosby Road Prior to Remediation



Photo 2: Battery Crosby Road After Completion of Remediation



Photo 3: Location of the Historical Battery Crosby Road Entrance During Remedial Construction Prior to Realignment



Photo 4: Remaining Portion of Historical Battery Crosby Road (center)



Photo 5: Slope Grubbing for Relocated Battery Crosby Road Entrance



Photo 6: Extension of Storm Drain Outfall from Northbound Lincoln Boulevard

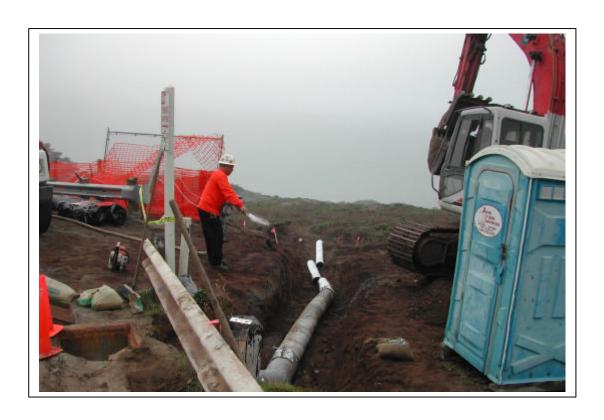


Photo 7: Replacement and Extension of Storm Drain Outfall from Southbound Lincoln Boulevard



Photo 8: Transite Drain Pipe Removed from Former Southbound Lincoln Boulevard Storm Drain Outfall



Photo 9: Placement and Compaction of Imported Sand Over Storm Drain Extension



Photo 10: Placement of Bi-Axial Geogrid



Photo 11: Building Up New Battery Crosby Road Entrance with Sand and Geogrid



Photo 12: Placement of Geocell Anchors and Tendons



Photo 13: Securing a Geocell Panel

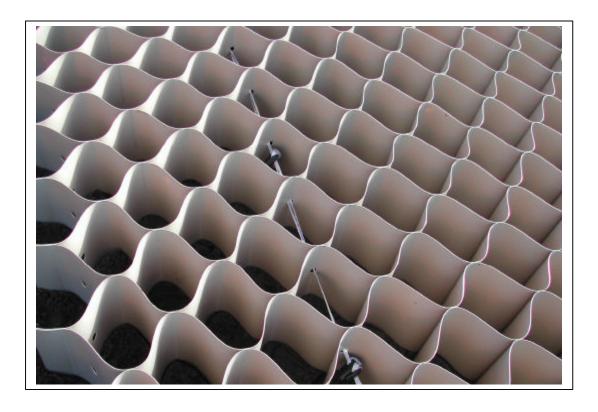


Photo 14: Tendon Secured with J-Hooks within Geocell



Photo 15: Four Tapered Geocell Panels in Position on Slope



Photograph 16: Backfilling of Geocell Panels



Photo 17: Final Slope of New Battery Crosby Road Entrance



Photo 18: Removal of Historical Battery Crosby Road Entrance



Photo 19: Former Historical Battery Crosby Road Entrance After Road Realignment



Photo 20: Construction of Drainage V-Ditch along Eastern Side of Battery Crosby Road



Photo 21: Installation of New Drain Inlet and Storm Drain



Photo 22: New Storm Drain Out Fall Complete



Photo 23: Placement of Imported Sand Road Base Fill



Photo 24: Geotextile Fabric and Edge Board Installation



Photo 25: Placement and Compaction of Imported Aggregate Road Base



Photo 26: New Road Graded to Match Historical Battery Crosby Road Section



Photo 27: Placed and Compacted Salvaged Chert Road Surface Material



Photo 28: Construction of New Battery Crosby Road Entrance



Photo 29: Placement and Compaction of New Entrance Base Rock



Photo 30: Placement of Hot Asphalt for Road Entrance Apron

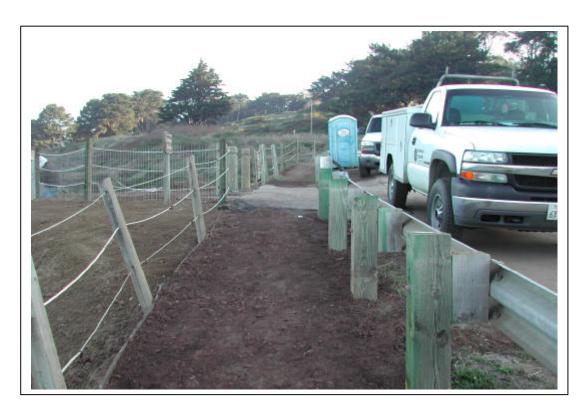


Photo 31: Repaired Footpath to Aid Site Erosion Control



Photo 32: Installed Bollards at New Road Entrance



Photo 33: Drilling and Setting of the Post-and-Cable Fence Posts



Photo 34: Post-and-Cable Fence Under Construction



Photo 35: Volunteers Planting Vegetation on New Road Entrance Slope

APPENDIX A

Laboratory Reports for Road Construction Materials and Draft Final Letter Report,
Sampling and Testing, Imported Dune Sand
(Geologica, Inc., 30 August 2004)

 \mathbf{CD}



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532 Laboratory Number 176111

Treadwell & Rollo 555 Montgomery Street San Francisco, CA 94111 Project#: 2893.12

Location: Presidio Baker Beach 3

<u>Sample ID</u>	<u>Lab ID</u>
BB3COMPA	176111-001
BB3COMPB	176111-002
BB3COMPC	176111-003
BB3COMPD	176111-004
BB3 COMP	176111-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

perations Manager

Date:

Signature:

Pròject Manager

Date

11/30/04

NELAP # 01107CA

Page 1 of



CASE NARRATIVE

Laboratory number:

176111

Client:

Treadwell & Rollo

Project:

2893.12

Location:

Presidio Baker Beach 3

Request Date:

11/17/04

Samples Received:

11/17/04

This hardcopy data package contains sample and QC results for one four-point soil composite, requested for the above referenced project on 11/17/04. The samples were received cold and intact.

Pesticides (EPA 8081A):

High response was observed for heptachlor in the CCV analyzed 11/19/04 05:16; average CCV drift met method requirements. No other analytical problems were encountered.

PCBs (EPA 8082):

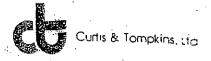
High recoveries were observed for Aroclor-1254 in the MS/MSD for batch 96627; the parent sample was not a project sample, the LCS was within limits, the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated sample. High surrogate recoveries were observed for decachlorobiphenyl and TCMX in the MS/MSD for batch 96627; the parent sample was not a project sample. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7470A):

Low recoveries were observed for antimony in the MS/MSD for batch 96610; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. Response exceeding the instrument's linear range was observed for iron in the MS/MSD for batch 96610. No other analytical problems were encountered.

Moisture (ASTM D2216/CLP):

No analytical problems were encountered.



Chain of Custody

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CHAIN OF CUSTODY RECORD

| S55 Montgomery Street, Sulte 1300, San Francisco, CA 94111 Ph: 415-955-9040 / Fax: 415-955-9041 | 2 Theatre Square, Sulte 216, Orlinda CA 94563 Ph: 925-253-4980 / Fax: 925-253-4985

501 14th Street, 3rd Floor, Oakland, CA 94612 Ph: 510-874-4500 / Fax: 510-874-4507

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Laboratory Comments/Notes:				and Co	A C C CO
۸	White Copy - Original Ye	Yellow Copy - Laboratory	y Pink Copy - Field		1001 UUZZ44

Ng cooler - Intact/Cald 38ms 11-17-04

4

PESTICIDES



	Organocl	ilorine Pesticide	35
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8081A
Field ID:	BB3 COMP	Batch#:	96630
Lab ID:	176111-005	Sampled:	11/17/04
Matrix:	Soil	Received:	11/17/04
Units:	ug/Kg	Prepared:	11/18/04
Basis:	dry	Analyzed:	11/18/04
Diln Fac:	1.000	-	

Moisture:

88

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	1.8	
beta-BHC	ND	1.8	
gamma-BHC	5.1	1.8	
delta-BHC	ND	1.8	
Heptachlor	ND	1.8	
Aldrin	ND	1.8	
Heptachlor epoxide	ND	1.8	
Endosulfan I	ND	1.8	
Dieldrin	ND	3.6	
4,4'-DDE	ND	3.6	
Endrin	ND	3.6	
Endosulfan II	ND	3.6	
Endosulfan sulfate	ND	3.6	
4,4'-DDD	ND	3.6	
Endrin ketone	ND	3.6	
4,4'-DDT	5.6	3.6	
Chlordane (Technical)	ND	32	
alpha-Chlordane	1.2	J 1.8	0.54
gamma-Chlordane	1.4	J 1.8	0.51
Methoxychlor	ND	18	
Toxaphene	ND	65	

Surrogate	%REC	Limits
TCMX	123	65-135
Decachlorobiphenyl	94	65-135

J= Estimated value

ND= Not Detected

RL= Reporting Limit

MDL= Method Detection Limit

Page 1 of 1



Batch QC Report

	Organoci	nlorine Pesticide	98
T - 3- II			
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC272837	Batch#:	96630
Matrix:	Soil	Prepared:	11/18/04
Units:	ug/Kg	Analyzed:	11/18/04
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin ketone	ND	3.3	
4,4'-DDT	ND	3.3	
Chlordane (Technical)	ND	30	
alpha-Chlordane	ND	1.7	0.49
gamma-Chlordane	ND	1.7	0.55
Methoxychlor	ND	17	:
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	77	65-135
Decachlorobiphenyl	104	65-135

ND= Not Detected

RL= Reporting Limit

MDL= Method Detection Limit

Page 1 of 1



Batch QC Report

	Organocl	nlorine Pesticide	es
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC272838	Batch#:	96630
Matrix:	Soil	Prepared:	11/18/04
Units:	ug/Kg	Analyzed:	11/22/04
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limite
gamma-BHC	16.69	15.42	92	65-135
Heptachlor	16.69	12.47	75	65-135
Aldrin	16.69	16.70	100	65-135
Dieldrin	16.69	16.31	98	65-135
Endrin	16.69	17.85	107	65-135
4,4'-DDT	16.69	17.01	102	65-135

Surrogate	%REC	Limita	
TCMX	99	65~135	
Decachlorobiphenyl	119	65-135	•



Batch QC Report

	Organocl	nlorine Pesticide	≘ \$
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8081A
Field ID:	ZZZZZZZZZZ	Batch#:	96630
MSS Lab ID:	176064-026	Sampled:	11/15/04
Matrix:	Soil	Received:	11/16/04
Units:	ug/Kg	Prepared:	11/18/04
Basis:	as received	Analyzed:	11/19/04
Diln Fac:	1.000		

Type:

MS

115

Cleanup Method: EPA 3620B

Lab ID: QC272839

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.3300	16.77	16.94	101	65-135
Heptachlor	<0.4900	16.77	14.76 #	88	65-135
Aldrin	<0.9300	16.77	16.82	100	65-135
Dieldrin	<0.5000	16.77	17.74	106	65-135
Endrin	<0.6500	16.77	18.15	108	65-135
4,4'-DDT	<1.800	16.77	16.13	96	65-135

Surrogate	%REC	Limits
TCMX	98	65-135
Decachlorobiphenyl	110	65-135

Type:

MSD

Lab ID:

QC272840

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	16.73	15.40	92	65-135	9	35
Heptachlor	16.73	13.71 #	82	65-135	7	35
Aldrin	16.73	15.97	95	65-135	5	35
Dieldrin	16.73	17.85	107	65-135	1	35
Endrin	16.73	18.88	113	65-135	4	35
4,4'-DDT	16.73	16.05	96	65-135	0	35

Surrogate	%REC	Limits
TCMX	92	65-135
Decachlorobiphenyl	118	65-135

^{#=} CCV drift outside limits; average CCV drift within limits per method requirements RPD= Relative Percent Difference Page 1 of 1

INITIAL CALIBRATION REPORT FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Name: Instrument: GC16

Gas Chromatograph #16 ECD Type: (normal)

Calnum: 234443043001

Reviewed By: MCH Date: 02-NOV-2004 23:49 Inj Vol (uL): 1

Calibration levels:

Standards	04WS1628	04WS1629	04WS1630	04WS1632	04WS1633	04WS1634	04WS1635
	23:49	00:19	00:50	01:21	01:52	02:22	02:54
Analyzed	02-NOV-2004 23:49 04WS1628	03-NOV-2004 00:19 04WS1629	03-NOV-2004 00:50 04WS1630	03-NOV-2004 01:21 04WS1632	03-NOV-2004 01:52 04WS1633	03-NOV-2004 02:22 04WS1634	03-NOV-2004 02:54 04WS1635
Ā	0	0	0	0	0	ö	Ö
Samplenum	pest_1	pest_2	pest_3	pest_4	pest_5	pest_6	pest_7
Segnum	234443043020 pest_1	234443043021 pest_2	234443043022 pest_3	234443043023 pest_4	234443043024 pest_5	234443043025 pest_6	234443043026 pest_7
Filename	307_020	307_021					
##	Н	7	ო	4	Ŋ	9	7

Chi Lii														
A 5472.0 6121.9 6798.1 8743.3 8385.9 9495.2 10837 ANGG R 1.253E-4 pg 7979.0 24 A 5904.6 6400.4 6971.8 8599.4 8204.1 8902.3 9921.1 ANGG R 1.275E-4 pg 7483.4 19 A 6400.9 6400.4 6491.8 4602.4 4631.6 4940.3 ANGG R 1.275E-4 pg 7489.0 8 A 6400.9 7109.5 7081.7 8475.4 8203.0 8971.9 9831.2 ANGG R 1.205E-4 pg 7487.9 3 A 7497.2 7229.5 7898.0 7327.1 7782.7 ANGG R 1.235E-4 pg 7487.9 3 7487.9 3 7487.9 3 7487.9 3 7487.9 3 7487.9 3 7487.9 3 7487.9 3 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9 7487.9	Analyte	Ch Ll	1.2	13	L4	1.5	Ţ.					00000001	MnR'2 MxRSD Flags	D Flags
A 5904.6 6400.4 6971.8 6599.4 6201.1 AVRG R 1.275E-4 pg 7843.4 19 A 5709.2 4928.9 4599.5 4881.3 4602.4 4631.6 4940.3 AVRG R 1.206E-4 pg 4899.0 8 A 640.9 7109.5 7081.7 8471.9 9831.2 AVRG R 1.206E-4 pg 4899.0 8 A 7497.2 7329.5 7205.5 7898.0 7375.7 7327.1 7782.7 AVRG R 1.397E-4 pg 7487.9 3 A 7487.2 7329.5 7635.2 7628.1 7752.9 8349.8 AVRG R 1.397E-4 pg 7487.9 3 A 7985.5 7639.3 8255.3 7930.6 8117.8 8490.4 AVRG R 1.247E-4 pg 7653.7 3 A 7986.7 7764.5 7639.3 8255.3 7930.6 8117.8 8490.4 AVRG R 1.247E-4 pg 7653.7 3 A 6113.1 6553.1 760	alpha-BHC	A 5472.0	6121.9	6798.1	8743.3	8385.9		10837	AVRG R	1.253E-4	Бd	7979.0 24	0.995 20	rsd ***
A 5709.2 4581.3 4602.4 4631.6 4940.3 ANG R 2.041E-4 pg 4899.0 8 A 8480.9 7109.5 7081.7 8475.4 8203.0 8871.9 9831.2 ANG R 1.206E-4 pg 4899.0 8 A 7497.2 7329.5 7898.0 7375.7 7327.1 7727.9 8349.6 ANG R 1.335E-4 pg 7487.9 3 A 7985.5 768.6 7915.7 7528.4 7461.8 7591.1 ANG R 1.347E-4 pg 7158.2 1 A 7985.5 768.6 7915.7 7227.1 7727.9 8349.6 ANG R 1.347E-4 pg 7158.2 1 A 7980.7 7784.8 7930.6 8117.8 8490.4 ANG R 1.247E-4 pg 7169.0 9 A 7980.7 7824.8 7121.2 7229.5 ANG R 1.248E-4 pg 7169.0 3 A 6113.1 6531.1 766.9 7759.6 7759.6 7759.6	gamme BHC	A 5904.6	6400.4	6971.8						1.275E-4	6 d	7843.4 19	0.995 20	
A 6460.9 7109.5 7081.7 8475.4 8203.0 8871.2 ANGG R 1.206E-4 pg 8293.4 12 A 7497.2 7329.5 7205.5 7898.0 7375.7 7327.1 7782.7 ANGG R 1.335E-4 pg 7487.9 3 A 6306.9 6337.8 6508.7 7594.2 7228.1 7727.9 8349.8 ANGG R 1.397E-4 pg 7637.7 3 A 7959.5 7695.2 7468.5 7915.7 7528.4 7461.8 7591.1 ANGG R 1.247E-4 pg 7653.7 3 A 7960.7 7809.0 7722.9 8303.4 7528.1 7659.5 ANGG R 1.247E-4 pg 7169.0 9 A 6113.1 6553.1 7040.0 7767.1 7534.4 7555.6 7896.8 7159.0 9 7169.0 9 A 6113.1 6553.1 7040.0 7767.1 7534.4 7575.6 ANG R 1.370E-4 pg 7169.0 9 A 6343.6	beta-BHC	A 5709.2						4940.3		2.041E-4	Бď		0.995 20	
A 6306.9 6337.8 6508.7 7594.2 7282.1 7727.9 8349.8 AVRG R 1.397E-4 pg 7487.9 3 11 A 7985.5 7695.2 7468.5 7915.7 7528.4 7461.8 7591.1 AVRG R 1.397E-4 pg 7653.7 3 A 7985.5 7754.5 7639.3 8255.3 7930.6 8117.8 8490.4 AVRG R 1.247E-4 pg 7653.7 3 A 7985.6 7754.5 7639.3 8255.3 7930.6 8117.8 8490.4 AVRG R 1.247E-4 pg 8021.1 4 A 7980.7 7809.0 7722.9 8303.4 7933.7 8035.1 8282.6 AVRG R 1.248E-4 pg 7653.7 3 A 7980.7 7809.0 7722.9 8303.4 7933.7 8035.1 8282.6 AVRG R 1.395E-4 pg 7169.0 9 A 7980.7 7809.0 7722.9 8303.4 7575.6 7599.5 AVRG R 1.395E-4 pg 7216.7 3 A 7980.7 7809.0 7722.9 8303.4 7575.6 7599.5 AVRG R 1.395E-4 pg 7216.7 3 A 6133.1 7045.6 6910.9 7454.8 7121.2 7203.8 7357.2 AVRG R 1.370E-4 pg 7216.7 3 A 6340.4 7091.5 7268.9 7750.0 7438.5 7388.5 7269.5 AVRG R 1.370E-4 pg 7216.7 3 A 6343.6 6421.6 6504.0 6815.8 6545.7 6411.9 6330.5 AVRG R 1.757E-4 pg 5691.7 8 A 4868.7 5272.0 5521.1 6084.1 5982.9 6089.7 6023.1 AVRG R 1.413E-4 pg 7078.8 4 A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 446.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 7778.5 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 7778.5 11	delta-BHC	A 8480.9			8475.4	8203.0	8871.9	9831.2		1.206E-4	Бď	8293.4 12	0.995 20	
A 6306.9 6337.8 6508.7 7594.2 7282.1 7727.9 8349.8 ANG R 1.397E-4 pg 7158.2 11 A 7985.5 7695.2 7468.5 7915.7 7528.4 7461.8 7591.1 ANG R 1.305E-4 pg 7637.3 3 A 7989.6 7754.5 7639.3 8255.3 7930.6 8117.8 8490.4 ANG R 1.247E-4 pg 7621.1 4 A 7980.7 7809.0 7722.9 8303.4 755.6 7599.5 ANG R 1.248E-4 pg 7169.0 9 A 7423.1 7040.0 7767.1 7534.4 757.6 7599.5 ANG R 1.395E-4 pg 7169.0 9 A 7423.1 7045.6 6910.9 7438.5 7358.5 7269.5 ANG R 1.370E-4 pg 7299.6 4 A 6343.6 6421.6 6504.0 6815.8 675.7 6411.9 6330.5 ANG R 1.413E-4 pg 7778.5 1	Heptachlor	A 7497.2	7329.5	7205.5	7898.0			7782.7		1.335E-4	Бď		0.995 20	
A 7985.5 7468.5 7915.7 7528.4 7461.8 7591.1 AVRG R 1.305E-4 pg 7663.7 3 A 7959.5 7754.5 7639.3 8255.3 7930.6 8117.8 8490.4 AVRG R 1.248E-4 pg 8021.1 4 A 7980.7 7782.9 8303.4 7933.7 8035.1 8282.6 AVRG R 1.248E-4 pg 8029.6 3 A 6113.1 6553.1 7040.0 7767.1 7534.4 7575.6 7599.5 AVRG R 1.348E-4 pg 7169.0 9 A 6113.1 6553.1 7040.0 7767.1 7534.4 7575.6 7599.5 AVRG R 1.348E-4 pg 7269.6 4 A 6113.1 6553.1 7060.0 7438.5 7338.5 7269.5 AVRG R 1.543E-4 pg 7216.7 3 A 6343.6 6421.6 6504.0 6815.8 6545.7 6411.9 6330.5 AVRG R 1.757E-4 pg 5691.7 8 A 4868.7 5272.0 5521.1 6089.7 6023.1 AVRG R 1	Aldrin	A 6306.9	6337.8	6508.7	7594.2	7282.1		8349.8		1.397E-4	Бđ	7158.2 11	0.995 20	
A 7959-5 7754-5 7639-3 8255-3 7930-6 8117-8 8490-4 AVRG R 1.247E-4 pg 8021.114 A 7980-7 7809-0 7722-9 8303-4 7933-7 8035-1 8282-6 AVRG R 1.248E-4 pg 8009-6 3 A 6113-1 6553-1 7040-0 7767-1 7534-4 7575-6 7599-5 AVRG R 1.395E-4 pg 7169-0 9 A 7423-1 7045-6 6910-9 7454-8 7121-2 7203-8 7357-2 AVRG R 1.386E-4 pg 7169-0 9 A 6940-4 7091-5 7268-9 7750-0 7438-5 7338-5 7269-5 AVRG R 1.370E-4 pg 7299-6 4 A 6343-6 6421-6 6504-0 6815-8 6545-7 6411-9 6330-5 AVRG R 1.543E-4 pg 7299-6 4 A 4868-7 5272-0 5521-1 6084-1 5982-9 6089-7 6023-1 AVRG R 1.413E-4 pg 5691-7 8 A 7502-0 7273-4 7117-7 7268-2 6999-0 6791-0 6600-5 AVRG R 1.413E-4 pg 5707-8 4 A 4431-6 4646-0 5128-6 5714-2 5689-3 5734-9 5874-0 AVRG R 1.881E-4 pg 5316-9 11 A 3316-3 3091-4 2900-1 2730-9 2629-1 2436-5 2345-4 AVRG R 3.559E-4 pg 2778-5 13	Heptachlor epoxide	A 7985.5	7695.2	7468.5		7528.4		7591.1		1.305E-4	Бď		0.995 20	
A 7980-7 7809-0 7722-9 8303-4 7933-7 8035-1 8282-6 AVRG R 1.248E-4 pg 8009-6 3 A 6113-1 6553-1 7040-0 7767-1 7534-4 7575-6 7599-5 AVRG R 1.395E-4 pg 7169-0 9 A 7423-1 7045-6 6910-9 7454-8 7121-2 7203-8 7357-2 AVRG R 1.386E-4 pg 7216-7 3 A 6940-4 7091-5 7268-9 7750-0 7438-5 7338-5 AVRG R 1.370E-4 pg 7216-7 3 A 6343-6 6421-6 6504-0 6815-8 6545-7 6411-9 6330-5 AVRG R 1.575E-4 pg 6481-9 3 A 4868-7 5272-0 5521-1 6084-1 5982-9 6089-7 6023-1 AVRG R 1.413E-4 pg 7078-8 4 A 4431-6 4646-0 5128-6 5714-2 5689-3 5734-9 5874-0 AVRG R 1.881E-4 pg 7778-5 13	gamma-Chlordane	A 7959.5			8255.3	7930.6		8490.4	AVRG R	1.247E-4	Бđ		0.995 20	
A 6113.1 6553.1 7045.6 6910.9 7454.4 7575.6 7599.5 AVRG R 1.395E-4 pg 7169.0 9 A 7423.1 7045.6 6910.9 7454.8 7121.2 7203.8 7357.2 AVRG R 1.386E-4 pg 7216.7 3 A 6940.4 7091.5 7268.9 7750.0 7438.5 7386.5 7269.5 AVRG R 1.370E-4 pg 7299.6 4 A 6343.6 6421.6 6504.0 6815.8 6545.7 6411.9 6330.5 AVRG R 1.543E-4 pg 6481.9 3 A 4868.7 5272.0 5521.1 6084.1 5982.9 6089.7 6023.1 AVRG R 1.757E-4 pg 5691.7 8 A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	alpha-Chlordane	A 7980.7	7809.0		8303.4	7933.7		8282.6		1.248E-4	bd		0.995 20	
A 7423.1 7045.6 6910.9 7454.8 7121.2 7203.8 7357.2 AVRG R 1.386E-4 pg 7216.7 3 A 6940.4 7091.5 7268.9 7750.0 7438.5 7269.5 AVRG R 1.370E-4 pg 7299.6 4 A 6343.6 6421.6 6504.0 6815.8 6545.7 6411.9 6330.5 AVRG R 1.543E-4 pg 6481.9 3 A 4868.7 5272.0 5521.1 6084.1 5982.9 6089.7 6023.1 AVRG R 1.757E-4 pg 5691.7 8 A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	4,4'-DDE	A 6113.1	6553.1	7040.0		7534.4	7575.6	7599.5		1.395E-4	Бđ		0.995 20	
A 6940-4 7091.5 7268.9 7750.0 7438.5 7338.5 7269.5 AVRG R 1.370E-4 pg 7299.6 4 A 6343.6 6421.6 6504.0 6815.8 6545.7 6411.9 6330.5 AVRG R 1.543E-4 pg 6481.9 3 A 4868.7 5272.0 5521.1 6084.1 5982.9 6089.7 6023.1 AVRG R 1.757E-4 pg 5691.7 8 A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.559E-4 pg 2778.5 13	Endosulfan I	A 7423.1	7045.6	6910.9	7454.8	7121.2		7357.2	AVRG R	1.386E-4	Đ.		0.995 20	
A 6343.6 6421.6 6504.0 6815.8 6545.7 6411.9 6330.5 AVRG R 1.543E-4 pg 6481.9 3 A 4868.7 5272.0 5521.1 6084.1 5982.9 6089.7 6023.1 AVRG R 1.757E-4 pg 5691.7 8 A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	Dieldrin	A 6940.4	7091.5	7268.9	7750.0	7438.5		7269.5	AVRG R	1.370E-4	Бď		0.995 20	
A 4868.7 5272.0 5521.1 6084.1 5982.9 6089.7 6023.1 AVRG R 1.757E-4 pg 5691.7 8 A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	Endrin	A 6343.6	6421.6				6411.9	6330.5	AVRG R	1.543E-4	50		0.995 20	
A 7502.0 7273.4 7117.7 7268.2 6999.0 6791.0 6600.5 AVRG R 1.413E-4 pg 7078.8 4 A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	4,4'-DDD	A 4868.7			6084.1	5982.9	6089.7	6023.1	AVRG R	1.757E-4	ъд		0.995 20	
A 4431.6 4646.0 5128.6 5714.2 5689.3 5734.9 5874.0 AVRG R 1.881E-4 pg 5316.9 11 A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	Endosulfan II	A 7502.0	7273.4	7117.7	7268.2	6999.0	6791.0	6600.5	AVRG R	1.413E-4	Ба		0.995 20	
A 3316.3 3091.4 2900.1 2730.9 2629.1 2436.5 2345.4 AVRG R 3.599E-4 pg 2778.5 13	4,4'-DDT	A 4431.6	4646.0	5128.6			5734.9	5874.0		1.881E-4	₽ď	5316.9 11	0.995 20	
A TABLE A COLOR A COLO	Methoxychlor	A 3316.3	3091.4	2900.1	2730.9	2629.1		2345.4	AVRG R	3.599E-4	Бď	2778.5 13	0.995 20	
A 015972 /12573 0/11.1 0011.3 0155.2 0200.1 0011.0 AVKS K 1.1/9E-4 pg 6/62.1 IU	Endosulfan sulfate	A 8139.2	7153.9	6711.1	6641.3	6433.2	6208.7	6047.0	AVRG R	1.479E-4	pg	6762.1 10	0.995 20	

Flags used: rsd=ICAL %RSD failure

AVRG: Average response factor

Instrument amount = a0 + response * a1 + response^2 * a2 Page 1 of 2

INITIAL CALIBRATION REPORT FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Gas Chromatograph #16 ECD Type: (normal) Name: Calnum: 234443043001 Instrument: GC16

Reviewed By: MCH (uL): 1 Date: 02-NOV-2004 23:49 Inj Vol (uL): 1

Analyte	Ch Li	1.2	Ŀ3	Ľ4	1.5	1.6	L7	Type X	a0	a1 a2	units	rî2 avg #RSD	MnR^2 MxRSD Flags	D Flags
Endrin ketone	A 8034.1	7735.6	7677.8	7725.1	7550.3	7266.6	6987.1	AVRG R	1.33	.321E-4	Бđ	7568.1 S	0.995 20	
TCMX	A 6824.1	7290.7	7230.9	7644.8	7159.8	7109.0	7365.5	AVRG R	1.38	1.383E-4	pd	7232.1 3	0.995 20	
Decachlorobiphenyl	A 10343	9035.1	8378.4	7754.7	7505.3	6236.9		AVRG R	1.2	1.211E-4	Бđ	8258.9 16	0.995 20	
alpha-BHC	B 39160	39989	39131	41392	38574	38485		AVRG R	2.5	2.535B-5	Бd	39455 3	0.995 20	
gamma-BHC	B 38349	37389	35926	37357	34792	34286	34376	AVRG R	2.7	2.773E-5	Бď	36068 5	0.995 20	
beta-BHC	B 30108	23506	20199	19191	17742	16615	16899	AVRG R	4.85	4.8525-5	рg	20609 23	0.995 20	rsd ***
delta-BHC	B 57237	43551	38354	38383	36069	34937	33755	AVRG R	2.4	2.480E~5	Бđ	40327 20	0.995 20	
Heptachlor	B 29288	26536	24476	24993	23231	21939	22798	AVRG R	4.04	4.040E-5	56	24752 10	0.995 20	
Aldrin	B 37398	35374	33350	34253	32081	30844	30808	AVRG R	2.9	2.990E-5	рд	33444 7	0.995 20	
Heptachlor epoxide	B 38248	34172	31075	30390	28418	26582	26088	AVRG R	3.2	3.256E-5	Бď	30710 14	0.995 20	
gamma-Chlordane	B 41102	36601	33624	33310	31590	30514	30293	AVRG R	2.9	2.953E-5	рд	33862 11	0.995 20	
alpha-Chlordane	B 40166	36108	33155	32414	30775	29489	29383	AVRG R	3.03	3.0242-5	ьв	33070 12	0.995 20	
4,4'-DDE	B 32371	31191	29981	29849	28583	27492		AVRG R	3.3	3.343E-5	bd	29911 6	0.995 20	
Endosulfan I	B 37051	32746	30016	29072	27388	25649	24788	AVRG R	3.38	3.386E-5	Бď	29530 14	0.995 20	
Dieldkin	B 33918	31715	29726	29043	27498	25900		AVRG R	м.	3.375E-5	Đđ.	29633 10	0.995 20	
Endrin	B 29624	27019	25120	24323	23132	21827		AVRG R	w.	3.972E-5	5d	25174 11	0.995 20	
4,4'-DDD	B 25353	23884	22455	22172	21557	21001		AVRG R	4.3	4.398E~5	Бď	22737 7	0.995 20	
Endosulfan II	B 34609	29941	27167	25581	24383	22757		AVRG R	3.6	3.649E-5	Бd	27406 16	0.995 20	
4,4'-DDT	B 18001	17233	17495	17908	17627	17323	16086	AVRG R	5.7	5.7538-5	Бđ	17382 4	0.995 20	
Methoxychlor	B 9153.5	7994.1	7404.8	7150.0	6998.1	6157.4		AVRG R	1.3	1.338E-4	Бđ	7476.3 14	0.995 20	
Endosulfan sulfate	B 35100	28294	24902	23255	22248	20881		AVRG R	3.8	3.879E-5	5d	25780 20	0.995 20	
Endrin ketone	B 32490	28351	26096	24849	24118	22842		AVRG R	3.7	3.780E-5	þď	26458 13	0.995 20	
TCMX	B 34048	31725	28689	27801	25730	24379		AVRG R	3.4	3.481E-5	Бď	28729 13	0.995 20	
Decachlorobiphenyl	B 28981	24029	21958	20271	19783	17632		AVRG R	4.5	4.523E-5	рд	22109 18	0.995 20	

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g	EPA 8081A	8081A
Method	EPA	EPA

Flags used: rsd=ICAL %RSD failure

Curves: AVRG: Average response factor

Instrument amount = a0 + response * a1 + response^2 * a2

Page 2 of 2

INITIAL CALIBRATION 2ND SOURCE VALIDATION SUMMARY FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Instid : GC16 Calname :

ICV 234443043035 (307_035) standards: 04WS2099

Analyte	Ch	ICV Segnum	Date	Spiked	Quant	Units		Ма	
alpha-BHC	A	234443043035	03-NOV-2004	25.000	24.414	pg	-2	15	
gamma-BHC	A	234443043035	03-NOV-2004	25.000	24.257	pg	-3	15	
beta-BHC	Α	234443043035	03-NOV-2004	25.000	21.776	pg	-13	15	
delta-BHC	Α	234443043035	03-NOV-2004	25.000	23.895	pg	-4	15	
Heptachlor	A	234443043035	03-NOV-2004	25.000	23.037	pg	-8	15	
Aldrin	Α	234443043035	03-NOV-2004	25.000	24.745	pg	-1	15	
Heptachlor epoxide	Α	234443043035	03-NOV-2004	25.000	23.704	pg	-5	15	
gamma-Chlordane	Α	234443043035	03-NOV-2004	25.000	24.172	pg	-3	15	
alpha-Chlordane	A	234443043035	03-NOV-2004	25.000	25.143	pg		15	
4,4'-DDE	Α	234443043035	03-NOV-2004	25.000	25.244	pg	1	15	
Endosulfan I	Α	234443043035	03-NOV-2004	25.000	24.863	pg	-1	15	
Dieldrin	Α	234443043035	03-NOV-2004	25.000	24.948	pg	0	15	
Endrin	A	234443043035	03-NOV-2004	25.000	25.384	pg	2	15	
4,4'-DDD	Α	234443043035	03-NOV-2004	25.000	25.681	pg	3	15	
Endosulfan II	Α	234443043035	03-NOV-2004	25.000	25.530	pg		15	
1.4,4'-DDT	A	234443043035	03-NOV-2004	25.000	25.827	pg	3	15	
Methoxychlor	Α	234443043035	03-NOV-2004	25.000	28.695	pg	15	15	
Endosulfan sulfate	Α	234443043035	03-NOV-2004	25.000	25.523	pg	2	15	
Endrin ketone	A	234443043035	03-NOV-2004	25.000	25.738	pg	3	15	
TCMX	Α	234443043035	03-NOV-2004	25.000	28.098	pg	12	15	
Decachlorobiphenyl	Α	234443043035	03-NOV-2004	25.000	26.815	pg		15	
alpha-BHC	В	234443043035	03-NOV-2004	25.000	23.455	pg		15	
gamma-BHC	В	234443043035	03-NOV-2004	25.000	22.965	pg	-8	15	
beta-BHC	В	234443043035	03-NOV-2004	25.000	20.732	pg	-17	15	V- ***
delta-BHC	В	234443043035	03-NOV-2004	25.000	21.974	pg	-12	15	
Heptachlor	В	234443043035	03-NOV-2004	25.000	21.984	pg	-12	15	
Aldrin	В	234443043035	03-NOV-2004	25.000	23.775	pg	-5	15	
Heptachlor epoxide	В	234443043035	03-NOV-2004	25.000	22.943	pg	-8	15	
gamma-Chlordane	В	234443043035	03-NOV-2004	25.000	23.168	pg	-7	15	
alpha-Chlordane	В	234443043035	03-NOV-2004				-5	15	
4,4'-DDE	В	234443043035	03-NOV-2004					15	
Endosulfan I	В	234443043035	03-NOV-2004					15	
Dieldrin	В	234443043035	03-NOV-2004	25.000	24.997	pg	0	15	
Endrin	В	234443043035	03-NOV-2004					15	
4,4'-DDD	В	234443043035	03-NOV-2004	25.000	25.211	pg	1	15	
Endosulfan II	В	234443043035	03-NOV-2004	25.000	24.961	pg	0	15	
4,4'-DDT	В	234443043035	03-NOV-2004	25.000	26.425	pg	6	15	
Methoxychlor	В	234443043035	03-NOV-2004					15	V+ ***
Endosulfan sulfate	В	234443043035	03-NOV-2004	25.000	24.715	pg	-1	15	
Endrin ketone	В	234443043035	03-NOV-2004	25.000	24.746	pg	-1	15	
TCMX	В	234443043035	03-NOV-2004	25.000	28.272	pg	13	15	
Decachlorobiphenyl	В	234443043035	03-NOV-2004	25.000	26.373	pg	5	15	

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Meth	ıod	Ch	Count	Avg %E		it Flags	
EPA	8081A	Α	22	5	15		
EPA	8081A	В	22	6	15		

+=high bias -=low bias v=ICV Page 1 of 1

INITIAL CALIBRATION REPORT FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Gas Chromatograph #21 ECD
Type: (normal) Name: Instrument: GC21 Calnum: 244467602001

Reviewed By: MCH Date: 19-NOV-2004 18:49 Inj Vol (uL): 1

Calibration levels:

Standards	4WS1628	4WS1629	4WS2051	4WS2052	4WS2053	4WS1634	4WS1635
Analyzed	19-NOV-2004 18:49 04WS1628	19-NOV-2004 19:19 04WS1629	19-NOV-2004 19:48 04WS2051	19-NOV-2004 20:17 04WS2052	19-NOV-2004 20:46 04WS2053	19-NOV-2004 21:15 04WS1634	19-NOV-2004 21:44 04WS1635
Samplenum	pest_1	pest_2	pest_3	pest_4	pest_5	pest_6	pest_7
Segnum	244467602005	244467602006	244467602007	244467602008	244467602009	244467602010	244467602011
Filename Segnum	324_005	324_006	324_007	324_008	324_009	324_010	324_011
##	H	7	ო	4	Ŋ	9	7

Analyte	Ch D1	27	£3	Ĺą	LS	L6	Ľ1	Type X a0	a1. a2	units	r^2 avg %RSD	MpR-2 MxKSD Flags
alpha-BHC	A 12674	12648	12026	11620	11065	12098	13277	AVRG R	8.196E-5	56	12201 6	0.995 20
даммедвис	A 11576	11529	11013	10475	9913.9	10832	11831	AVRG R	9.071E-5	Бď	11024 6	0.995 20
beta-BHC	A 5190.3	5171.8	4913.4	4573.3	4300.9	4478.6	4568.1	AVRG R	2.109E-4	Бď	4742.3 7	0.995 20
delta-BHC	A 11379	11368	10920	10288	9735.2	10711	11799	AVRG R	9.186E-5	Бď	10886 7	0.995 20
Heptachlor	A 10900	11032	10758	1001	9366.0	10459	11339	AVRG R	9.476E-5	БĞ	10553 6	0.995 20
Aldrin	A 11131	11160	10748	9926.5	9248.0	10325	11124	AVRG R	9.503E-5	Ēď	10523 7	0.995 20
Heptachlor epoxide	A 10311	10327	8.8666	9078.2	8415.2	9315.7	9779.8	AVRG R	1.041E-4	Бд	9603.6 7	0.995 20
gamma-Chlordane	A 10417	10334	10062	9115.9	8437.1	9522.0	10289	AVRG R	1.027E-4	Бd	9739.58	0.995 20
alpha-Chlordane	A 10133	10005	9757.0	8756.8	8092.0	9086.7	9733.5	AVRG R	1.068E-4	Бđ	9366.38	0.995 20
4,4'-DDE	A 9944.1	9814.8	9635.6	8714.1	8065.4	9477.1	10514	AVRG R	1.058E-4	Бď	9452.1 9	0.995 20
Endosulfan I	A 9455.3	9376.8	9092.8	8161.3	7547.7	8327.6	8656.2	AVRG R	1.155E-4	Бd	8 659.7 8	0.995 20
Dieldrin	A 10298	10249	10009	9091.8	8443.0	9768.3	10451	AVRG R	1.025E-4	50	9758.5 8	0.995 20
Endrin	A 7824.0	7699.0	7671.2	6580.2	5986.4	7210.4	7838.2	AVRG R	1.378E-4	рд	7258.5 10	0.995 20
4,4'-DDD	A 8120.4	8040.1	7671.3	6842.0	6320.6	7287.5	7937.6	AVRG R	1.340E-4	Бď	7459.9 9	0.995 20
Endosulfan II	A 8248.6	8136.5	7849.4	6996.2	6469.3	7360.6	7852.4	AVRG R	1.323E-4	5đ	7559.0 9	0.995 20
4,4'-DDT	A 7105.5 7238.3 7609.0 6690.9	7238.3	7609.0	6.0699	6166.8	7439.8	8339.6	AVRG R	1.384E-4	Бđ	7227.2 10	0.995 20
Methoxychlor	A 3230.9	3196.9	3364.2	2880.6	2641.0	3159.8	2895.3	AVRG R	3.276E-4	Бđ	3052.7 8	0.995 20
Endosulfan sulfate	A 7203.0 7102.9	7102.9	6.7069	6074.0	5583.9	6406.9	7142.7	AVRG R	1.508E-4	Бđ	6631.69	0.995 20
Endrin ketone	A 8077.0 7901.0 7553.2 6693.1	7901.0	7553.2	6693.1	6209.9	7050.1	7400.8	AVRG R	1.376E-4	ъд	7269.3 9	0.995 20

AVRG: Average response factor Curves:

Instrument amount = a0 + response * a1 + response^2 * a2

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INITIAL CALIBRATION REPORT FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Gas Chromatograph #21 ECD Type: (normal) Name: Calnum: 244467602001 Instrument: GC21

Reviewed By: MCH Date: 19-NOV-2004 18:49 Inj Vol (uL): 1

Analyte	Ch 121	2.1	L3	L4	L5	L6	L7 1	Type X a0	ä1 ä2	unite	r^2 avg %RSD	MnR72 MxRSD Flags
TCMX	A 8612.7	8295.8	7727.3	7375.4	9.6869	7447 3 7	7947.0	AVRG R	1.287E-4	6d	7 7.0777	0.995 20
Decachlorobiphenyl	A 5499.8	5422.9	5723.8	4719.4	4184.3	5371.9	*	AVRG R	1.9405-4	Бď	5153.7 11	0.995 20
alpha-BHC	B 13046	11790	11040	11198	10292	11166 1	11780 #	AVRG R	8.716E-5	Бd	11473 7	0.995 20
gamma-BHC	B 11368	10292	9.6696	9816.5	8898.2	9742.3 1	10250	AVRG R	9.991E-5	Бď	10000 8	0.995 20
beta-BHC	B 4489.6	4018.2	3974.6	4036.3	3639.4	3854.9 3	3953.4 A	AVRG R	2.503E-4	 6d	3995.2 6	0.995 20
delta-BHC	в 11593	10277	9817.2	9799.4	8784.2	9617.1 1	10147 A	AVRG R	9.995E-5	6d	10005 8	0.995 20
Heptachlor	B 9594.6	8742.4	8580.9	8,6098	7676.3	8360.98	8818.5 A	AVRG R	1.159E-4	bd Bd	8626.2 7	0.995 20
Aldrin	B 10298	9275.9	9.6688	8710.7	7620.3	8278.2 8	8666.8	AVRG R	1.134E-4	bd	8821.3 9	0.995 20
Heptachlor epoxide	B 9212.1	8298.8	8073.8	7892.9	6851.3	7431.1 7	7728.8 #	AVRG R	1.262E-4	, 6d	7927.0 9	0.995 20
gamma-Chlordane	B 9288.3	8285.6	8087.7	7905.2	6830.0	7454.2 7	7892.9 A	AVRG R	1.256E-4	Bd	7963.4 9	0.995 20
alpha-Chlordane	B 8759.0	7877.4	7675.9	7522.5	6461.6	7047.2 7	7432.2 A	AVRG R	1.326E-4	Bd	7539.4 9	0.995 20
4,4'-DDE	B 8837.3	7840.5	7734.1	7786.8	6663.3	7377.8 7	7825.4 A	AVRG R	1.2955-4	Ed	7723.6 8	0.995 20
Endosulfan I	B 8412.5	7566.2	7333.7	7124.9	6132.2	6606.4 6	6846.1 #	AVRG R	1.399E-4	5d	7146.0 10	0.995 20
Dieldrin	B 9098.1	8032.8	7804.2	7794.1	6726.0	7397.6 7	7700.2 A	AVRG R	1.283E-4	Bd	7793.3 9	0.995 20
Hardra Hardra	B 6666.5	5859.8	5640.9	5568.1	4622.1	5200.1 5	5429.3 A	AVRG R	1.795E-4	pg.	5569.5 11	0.995 20
4,4'-DDD	B 7720.4	6741.8	6382.3	6250.9	5362.1	5828.4 6	6113.8 A	AVRG R	1.577E-4	6d	6342.8 12	0.995 20
Endosulfan II	B 7878.3	6982.9	6730.7	6672.1	5758.1	6286.2 6	6532.6 #	AVRG R	1.494E-4	6d	6691.5 10	0.995 20
4,4'-DDT	B 6341.6	5816.4	5863.6	6047.9	5137.8	5766.4 6	6225.9 #	AVRG R	1.699E-4	£04	5885.7 7	0.995 20
Methoxychlor	B 2609.5	2393.2	2407.5	2527.8	2130.5	2316.3 2	2302.1 4	AVRG R	4.195E-4	 5d	2383.8 7	0.995 20
Endosulfan sulfate	B 6892.6	6061.9	5791.6	5713.2 4921.7	4921.7	5392.2 5	5870.1 #	AVRG R	1.722E-4	bd	5806.2 10	0.995 20
Endrin ketone	B 9561.8	7698.8	7261.0	7205.0	6274.0	6754.1 6	6861.9	AVRG R	1.356E-4	5d	7373.8 14	0.995 20
TCMX	B 8017.0 7427.8 7012.8 7316.7	7427.8	7012.8		0.9089	7351.3 7	7608.3 2	AVRG R	1.358E-4	Ed	7362.8 5	0.995 20
Decachlorobiphenyl	B 4639.2	4231.4	4017.4	4149.7	3432.3	3730.4 4	4156.2 #	AVRG R	2.469E-4	bd.	4050.9 9	0.995 20

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Merc	EPA	202

Instrument amount = a0 + response * a1 + response^2 * a2 Page 2 of 2 AVRG: Average response factor

INITIAL CALIBRATION 2ND SOURCE VALIDATION SUMMARY FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Instid : GC21 Calname :

ICV 244467602013 (324 013) standards: 04WS2099

Analyte	Ch	ICV Seqnum	Date	Spiked	Quant	Units %D	Max
alpha-BHC	Α	244467602013	19-NOV-2004	25.000	24.697	pg -1	15
gamma-BHC	A	244467602013	19-NOV-2004	25.000	24.831	pg -1	15
beta-BHC	A	244467602013	19-NOV-2004	25.000	24.594	pg -2	15
delta-BHC	Α	244467602013	19-NOV-2004	25.000	25.406	pg 2	15
Heptachlor	Α	244467602013	19-NOV-2004	25.000	24.843	pg -1	15
Aldrin	Α	244467602013	19-NOV-2004	25.000	24.962	pg 0	15
Heptachlor epoxide	Α	244467602013	19-NOV-2004	25.000	24.157	pg -3	15
gamma-Chlordane	Α	244467602013	19-NOV-2004	25.000	23.747	pg -5	15
alpha-Chlordane	A	244467602013	19-NOV-2004	25.000	24.196	pg -3	15
4,4'-DDE	Α	244467602013	19-NOV-2004	25.000	23.952	pg -4	15
Endosulfan I	A	244467602013	19-NOV-2004	25.000	24.628	pg -1	15
Dieldrin	Α	244467602013	19-NOV-2004	25.000	24.190	pg -3	15
Endrin	A	244467602013	19-NOV-2004	25.000	24.194	pg -3	15
4,4'-DDD	A	244467602013	19-NOV-2004				15
Endosulfan II	A	244467602013	19-NOV-2004	25.000	24.860	pg -1	15
4,4'-DDT	Α	244467602013	19-NOV-2004	25.000	24.026	pg -4	15
Methoxychlor	A	244467602013	19-NOV-2004	25.000	26.709	pg 7	15
Endosulfan sulfate	A	244467602013	19-NOV-2004	25.000	24.669	pg -1	15
Endrin ketone	Α	244467602013	19-NOV-2004	25.000	24.906	pg 0	15
TCMX	Α	244467602013	19-NOV-2004	25.000	30.054	pg 20	15
Decachlorobiphenyl	Α	244467602013	19-NOV-2004	25.000	26.552	pg 6	15
alpha-BHC	В	244467602013	19-NOV-2004	25.000	24.002	pg -4	15
gamma-BHC	В	244467602013	19-NOV-2004	25.000	24.163	pg -3	15
beta-BHC	В	244467602013	19-NOV-2004	25.000	24.621	pg -2	15
delta-BHC	В	244467602013	19-NOV-2004	25.000	24.405	pg -2	15
Heptachlor	В	244467602013	19-NOV-2004	25.000	24.375	pg -3	15
Aldrin	В	244467602013	19-NOV-2004	25.000	24.265	pg -3	15
Heptachlor epoxide	В	244467602013	19-NOV-2004	25.000	23.561	pg -6	15
gamma-Chlordane	В	244467602013	19-NOV-2004	25.000	23.202	pg -7	15
alpha-Chlordane	В	244467602013	19-NOV-2004	25.000	23.884	pg -4	1.5
4,4'-DDE	В	244467602013	19-NOV-2004	25.000	23.731	pg -5	15
Endosulfan I	В	244467602013	19-NOV-2004	25.000	24.182	pg -3	15
Dieldrin	В	244467602013	19-NOV-2004	25.000	23.920	pg -4	15
Endrin	В	244467602013	19-NOV-2004	25.000	23.379	pg -6	15
4,4'-DDD	В	244467602013	19-NOV-2004	25.000	23.900	pg -4	15
Endosulfan II	В	244467602013	19-NOV-2004	25.000	24.065	pg -4	15
4,4'-DDT	В	244467602013	19-NOV-2004	25.000	23.557	pg -6	15
Methoxychlor	В	244467602013	19-NOV-2004				15
Endosulfan sulfate	В	244467602013	19-NOV-2004	25.000	24.067	pg -4	15
Endrin ketone	В	244467602013	19-NOV-2004	25.000	23.912	pg -4	15
TCMX	В	244467602013	19-NOV-2004	25.000	30.269	pg 21	15
Decachlorobiphenyl	В	244467602013	19-NOV-2004	25.000	25.835	pg 3	15

Method	Ch	Cour	it Avg %E		t Flags
EPA 8081A	A	22	3	15	
EPA 8081A	В	22	5	15	

Instrument: GC16 Gas Chromatograph #16 ECD

Seqnum: 234465868002 Run Name: Injected: 18-NOV-2004 12:28

Filename: 323 002 Standard(s): 04WS2193

Analyte		Ch	Area
Endrin		A	358856.63
Endrin aldehyde		A	1441.37
Endrin ketone		A	5751.24
Endrin Breakdown %: Breakdown Limit %: 15	2		

Analyte	Ch	Area
4,4'-DDT	A	503180.76
4,4'-DDE	Α	2607.19
4,4'-DDD	A	52208.33
4,4'-DDT Breakdown %: 10 Breakdown Limit %: 15		

Analyte		Ch	Area
Endrin	<u> </u>	В	1268999.79
Endrin aldehyde		В	0
Endrin ketone		В	29963.96
Endrin Breakdown %: Breakdown Limit %: 15	2		

Analyte	Cl	n Area
4,4'-DDT	В	1647303.26
4,4'-DDE	В	16783.27
4,4'-DDD	В	227646.91
4,4'-DDT Breakdown %: Breakdown Limit %: 15	13	

Instrument: GC16

Gas Chromatograph #16 ECD

Seqnum: 234465868012 Run Name:

Injected: 18-NOV-2004 20:38

Filename: 323 012 Standard(s): 04WS2193

Analyte	Ch	ı Area
Endrin	A	335117.24
Endrin aldehyde	A	102.92
Endrin ketone	A	4784.9
Endrin Breakdown %: Breakdown Limit %: 15	1	

Analyte	Ch	n Area
4,4'-DDT	А	470064.54
4,4'-DDE	A	2499.89
4,4'-DDD	A	27073.06
4,4'-DDT Breakdown %: Breakdown Limit %: 15	6	

Analyte	Cl	n Area
Endrin	В	1248026.94
Endrin aldehyde	В	0
Endrin ketone	В	37048.22
Endrin Breakdown %: Breakdown Limit %: 15	3	

Analyte		Ch	Area
4,4'-DDT		В	1297802.37
4,4'-DDE		В	20784.91
4,4'-DDD		В	202851.5
4,4'-DDT Breakdown %: Breakdown Limit %: 15	15		

Instrument: GC16 Gas Chromatograph #16 ECD

Seqnum: 234465868031 Run Name: Injected: 19-NOV-2004 06:17

Filename: 323 031 Standard(s): 04WS1614

Analyte	Ch	n Area
Endrin	A	367155.73
Endrin aldehyde	Α	377.94
Endrin ketone	A	6008.11
Endrin Breakdown %: Breakdown Limit %: 15	2	

Analyte	Ch	Area
4,4'-DDT	A	556020.17
4,4'-DDE	A	3407.41
4,4'-DDD	A	45595.53
4,4'-DDT Breakdown %: Breakdown Limit %: 15	8	

Analyte	Ch	Area
Endrin	В	1317337.38
Endrin aldehyde	В	9307.84
Endrin ketone	В	28769.89
Endrin Breakdown %: Breakdown Limit %: 15	3	

Analyte	Ch	Area
4,4'-DDT	В	1754046.68
4,4'-DDE	В	23014.89
4,4'-DDD	В	214971.95
4,4'-DDT Breakdown %: Breakdown Limit %: 15	12	

Instrument: GC16 Gas Chromatograph #16 ECD

Seqnum: 234465868043 Run Name:

Injected: 19-NOV-2004 17:53

Filename: 323_043 Standard(s): 04WS2193

Analyte	Ch	n Area
Endrin	A	342956.17
Endrin aldehyde	A	2496.32
Endrin ketone	A	5895.31
Endrin Breakdown %: Breakdown Limit %: 1	2 5	

-Analyte	Ch	Area
4,4'-DDT	A	546700.63
4,4'-DDE	А	3133.25
4,4'-DDD	A	47980
4,4'-DDT Breakdown %: Breakdown Limit %: 15	9	

Analyte		Ch	Area
§ Endrin		В	1384079.32
Endrin aldehyde		В	27263.15
Endrin ketone		В	29797.05
Endrin Breakdown %: Breakdown Limit %: 15	4		

Analyte	Ch	Area
4,4'-DDT	В	1621806.44
4,4'-DDE	В	20234.17
4,4'-DDD	В	222214.72
4,4'-DDT Breakdown %: Breakdown Limit %: 15	13	

Instrument: GC21

Gas Chromatograph #21 ECD

Segnum: 244471586003 Run Name:

Filename: 327 003 Standard(s): 04WS2193

Injected: 22-NOV-2004 11:46

Analyte		Ch	Area
Endrin		Α	364516.47
Endrin aldehyde		Α	25556.13
Endrin ketone		Α	27958.57
Endrin Breakdown %: Breakdown Limit %: 15	13		

Analyte	Ch	Area
4,4'-DDT	A	779609.63
4,4'-DDE	A	3737.6
4,4'-DDD	A	18587.85
4,4'-DDT Breakdown %: Breakdown Limit %: 15	3	

Analyte	Ch	Area	
Endrin	В	258563.78	
Endrin aldehyde	В	27638.67	
Endrin ketone	В	33332	
Endrin Breakdown %: Breakdown Limit %: 15	19 P ***		Ch. A used

for spring,

1				WC.
Analyte	Zingerikee		Ch	ı Area
4,4'-DDT			В	642467.62
(4,4'-DDE			В	3364.82
¼4,4'-DDD			В	21236.16
- # - #				
4,4'-DDT Breakdown	응:	4		
Breakdown Limit %:	15			

P=PEM failure Page 1 of 1

Instrument: GC21

Gas Chromatograph #21 ECD

Segnum: 244471586009 Run Name:

Injected: 22-NOV-2004 14:49

Filename: 327 009

Standard(s): 04WS1614

	Analyte	Ch	Area
ſ	Endrin	A	369868.24
1	Endrin aldehyde	A	19438.06
	Endrin ketone	A	33713.35
	Endrin Breakdown %: Breakdown Limit %: 15	13	

· ·	all a	Area
Anaryce	CII	
#4,4'-DDT	A	786246.77
4,4'-DDE	A	3001.15
4,4'-DDD	A	28412.13
4,4'-DDT Breakdown %: 4 Breakdown Limit %: 15	1	

Analyte	Ch	Area	
Endrin	В	266466.5	
Endrin aldehyde	В	20656.62	
Endrin ketone	В	36184.5	
Endrin Breakdown %: Breakdown Limit %: 15	18 P ***		Ch. A - used

			£05	rept.	
	······································		(rept.	ulula
Analyte 4,4'-DDT	Cn B	Area 631419.66			
4,4'-DDE	В	2944.5			
4,4'-DDD	В	24617.89			
4,4'-DDT Breakdown %: 4 Breakdown Limit %: 15					

e=PEM failure Dage 1 of 1

IDF : 1.0 Instid : GC16 Run Name : ccv

 Instid : GC16
 Run Name : ccv
 IDF : 1.0

 Seqnum : 234465868004
 Filename : 323_004
 Injected : 18-NOV-2004 13:29

 Calnum : 234443043001
 Caldate : 02-NOV-2004
 Caltype :

Standards: 04WS2052

	50000000000		100000000000000000000000000000000000000					***********	800000000000000000000000000000000000000
Analyte	Ch	Avg RF/CF	RF/CF	SpkAmt	QuantAmt		D Max %D		
alpha-BHC	A				19.55846			rsd	***
gamma-BHC	A	7843.4	7744.2	20.00000	19.74707				
beta-BHC	A				18.26727				
delta-BHC	A	8293.4	7513.7	20.00000	18.11981	pg -	9 15		
Heptachlor	A	7487.9	7445.8	20.00000	19.88744	pg -			
Aldrin	Α				19.92524		0 15		
Heptachlor epoxide	A				20.45451		2 15		
gamma-Chlordane	Α	8021.1	8236.2	20.00000	20.53653	pg	3 15		
alpha-Chlordane	A	8009.6	8322.8	20.00000	20.78208	pg ·	4 15		
4,4'-DDE	Α	7169.0	7987.5	40.00000	44.56700	pg 1	1 15		
Endosulfan I	Α	7216.7	7508.0	20.00000	20.80753	pg ·	4 15		
Dieldrin	Α	7299.6	7869.6	40.00000	43.12321	pg	8 15		
Endrin	A	6481.9	7017.1	40.00000	43.30271	pg	8 15		
4,4'-DDD	A	5691.7	6341.8	40.00000	44.56924				
Endosulfan II	A	7078.8	7461.5	40.00000	42.16199	pg	5 15		
_4,4'-DDT	Α	5316.9	5574.1	40.00000	41.93471	pg	5 15		
Methoxychlor	Α	2778.5	2570.2	200.0000	185.0033	pg -	7 15		
Endosulfan sulfate	A	6762.1	6644.6	40.00000	39.30489	pg -	2 15		
Endrin ketone	Α	7568.1	7740.8	40.00000	40.91278	pg .	2 15		
TCMX	Α	7232.1	6914.5	40.00000	38.24340	pg -	4 15		
Decachlorobiphenyl	A	8258.9	7615.0	40.00000	36.88173	pg -	8 15		
alpha-BHC	В	39455	34488	20.00000	17.48229	pg -1	3 15		
gamma-BHC	В	36068	32284	20.00000	17.90175	pg -1	0 15		
beta-BHC	В	20609	16971	20.00000	16.46978	pg -1			csd ***
delta-BHC	В	40327	32711	20.00000	16.22322	pg -1	9 15	C- 4	***
Heptachlor	В	24752	25151	20.00000	20.32296	pg	2 15		
Aldrin	В	33444	30252	20.00000	18.09100	pg -1	0 15		
Heptachlor epoxide	В	30710	28288	20.00000	18.42257	pg -	8 15		
gamma-Chlordane	В	33862	31572	20.00000	18.64719	pg -	7 15		
alpha-Chlordane	В	33070	30619	20.00000	18.51784	pg -	7 15		
4,4'-DDE	В	29911	28810	40.00000	38.52761	pg -	4 15		
Endosulfan I	В	29530	27564	20.00000	18.66822	pg -	7 15		
Dieldrin	В	29633	27915	40.00000	37.68102	pg -	6 15		
Endrin	В	25174	25115	40.00000	39.90596	pg	0 15		
4,4'-DDD	В	22737	22943	40.00000	40.36206	pg	1 15		
Endosulfan II	В	27406	24763	40.00000	36.14211	pg -1	0 15		
4,4'-DDT	В	17382	17813	40.00000	40.99278	pg	2 15		
Methoxychlor	В	7476.3	7663.2	200.0000	205.0007	pg	3 15		
Endosulfan sulfate	В	25780	21508	40.00000	33.37206	pg -1	7 15	C- *	***
Endrin ketone	В	26458	23982	40.00000	36.25755	pg -	9 15		
TCMX	В	28729	22628	40.00000	31.50564	pg -2	1 15	C-	
Decachlorobiphenyl	В	22109	18915	40.00000	34.22195	pg -1	4 15		
Average EPA 8081A	A		(cor	unt=22)			5 15		
Average EPA 8081A	В		(coi	unt=22)			9 15		

⁻⁼low bias c=CCV rsd=ICAL %RSD failure Page 1 of 1

IDF : 1.0 Instid : GC16 Run Name : ccv

Instid : GC16 Run Name : ccv IDF : 1.0
Seqnum : 234465868014 Filename : 323_014 Injected : 18-NOV-2004 21:39
Calnum : 234443043001 Caldate : 02-NOV-2004 Caltype :

Standards: 04WS2051

				***************************************				35.73555550	
Analyte	С'n	Avg RF/CF	RF/CF	SpkAmt	QuantAmt	IIni	ts %D Max	&D	Flags
alpha-BHC	A				10.00111		0		rsd ***
gamma-BHC	A				10.29380		3	15	
beta-BHC					10.25294		3	15	
delta-BHC	A				8.678473		-13	15	
Heptachlor	Α				11.22679		12	15	
Aldrin	A				10.39740		4	15	
Heptachlor epoxide	Α				11.13130		11	15	
gamma-Chlordane	Α				10.66812		7	15	
alpha-Chlordane	Α	8009.6	8622.9	10.00000	10.76573	pg	8	15	
4,4'-DDE	Α	7169.0	7778.2	20.00000	21.69968	pg	8	15	
Endosulfan I	A				10.75396		8	15	
Dieldrin	Α	7299.6	8066.2	20.00000	22.10040	pg	11	15	
Endrin	Α	6481.9	7200.3	20.00000	22.21668	pg	11	15	
4,4'-DDD	Α	5691.7	6072.0	20.00000	21.33657	pg	7	15	
Endosulfan II	A				21.38578		7	15	
4,4'-DDT	Α	5316.9	4821.8	20.00000	18.13758	рg	-9	15	
Methoxychlor	Α	2778.5	2672.0	100.0000	96.16542	pg	-4	15	
Endosulfan sulfate	Α	6762.1	6590.3	20.00000	19.49198	pg	-3	15	
Endrin ketone	Α	7568.1	7525.6	20.00000	19.88780	рg	-1	15	
TCMX	Α	7232.1	8090.5	20.00000	22.37378	рg	12	15	
Decachlorobiphenyl	Α	8258.9	7920.8	20.00000	19.18138	pg	-4	15	
alpha-BHC	В	39455	41945	10.00000	10.63114	рg	6	15	
gamma-BHC	В	36068	39351	10.00000	10.91030	рg	9	15	
beta-BHC	В	20609	21496	10.00000	10.43044	рg	4	15	rsd ***
delta-BHC	В	40327	37762	10.00000	9.364121	pg	-6	15	
Heptachlor	В	24752	30689	10.00000	12.39900	рg	24	15	C+ ***
Aldrin	В	33444	35811	10.00000	10.70773	рg	7	15	
Heptachlor epoxide	В	30710	33678	10.00000	10.96635	pg	10	15	
gamma-Chlordane	В	33862	36372	10.00000	10.74121	рg	7	15	
alpha-Chlordane	В	33070	35435	10.00000	10.71503	рg	7	15	
4,4'-DDE	В	29911	31325		20.94570		5	15	
Endosulfan I	В	29530	31993		10.83419		8	15	
Dieldrin	В	29633	31474		21.24252		6	15	
Endrin	В	25174	27783		22.07297		10	15	
4,4'-DDD	В	22737			21.58738			15	
Endosulfan II	В	27406	27389		19.98743		0	15	
4,4'-DDT	В	17382	16725		19.24431		-4	15	
Methoxychlor	В				101.5817		2	15	
Endosulfan sulfate	В	25780			17.95520		-10	15	
Endrin ketone	В	26458	25096		18.97086		-5	15	
TCMX	В	28729	28949		20.15343		1	15	
Decachlorobiphenyl	В	22109	19916		18.01660	рg	-10	15	
Average EPA 8081A	A		-	unt=22)			7	15	
Average EPA 8081A	В		(00	unt=22)			7	15	

+=high bias c=CCV rsd=ICAL %RSD failure Page 1 of 1

Instid : GC16 Run Name : pest_4

Instid : GC16 Run Name : pest_4 IDF : 1.0
Seqnum : 234465868029 Filename : 323_029 Injected : 19-NOV-2004 05:16
Calnum : 234443043001 Caldate : 02-NOV-2004 Caltype :

Standards: 04WS2052

Analyte	Ch	Avg RF/CF	RF/CF	SpkAmt	QuantAmt	Units	%D 1	Max %D	Fla	ıgs	
alpha-BHC					24.24854		21	15	C+	rsd	***
gamma-BHC	Α				23.87150		19	15	C+	***	
beta-BHC	A				21.13590		6	15			
delta-BHC	A				20.76410		4	15			
Heptachlor	Α				23.35656		17	15	C+	***	
Aldrin	A				22.94097		15	15			
Heptachlor epoxide	A				22.53256		13	15			
gamma-Chlordane	Α				22.12098		11	15			
alpha-Chlordane					22.16978		11	15			
4,4'-DDE	Α				46.11606		15	15			
Endosulfan I	A				22.25321		11	15			
Dieldrin	Α				45.10989		13	15			
Endrin	A				44.78692		12	15			
4,4'-DDD					44.40207		11	15			
Endosulfan II					42.60119		7	15			
4,4'-DDT					42.32075		6	15			
Methoxychlor					186.2856		-7	15			
Endosulfan sulfate					37.97457		-5	15			
Endrin ketone					39.78730	••	-1	15			
TCMX	A				45.01418		13	15			
Decachlorobiphenyl	A				34.22904		-14	15			
alpha-BHC	В				21.51516		8	15			
gamma-BHC	В				21.73832		9	15			
beta-BHC	В				19.25571		-4		rsd	***	į
delta-BHC	В				18.74756		-6	15		•	
Heptachlor	В	24752			24.30061		22		C+	***	
Aldrin	В	33444			20.97766		5	15	•		
Heptachlor epoxide	В				20.58092		3	15			
gamma-Chlordane	В	33862			20.62837		3	15			
alpha-Chlordane	В	33070			20.35365		2	15			
4,4'-DDE	В	29911			40.80587		2	15			
Endosulfan I	В	29530			20.30509		2	15			
Dieldrin	В	29633			40.23141		1	15			
Endrin	В	25174			41.80520		5	15			
4,4'-DDD	В	22737	23506		41.35219		3	15			
Endosulfan II	В	27406	25526		37.25588		-7	15			
4,4'-DDT	B	17382	18421		42.39089		6	15			
Methoxychlor	В				205.1097		3	15			
Endosulfan sulfate	В	25780			33.67570		-16		c-	***	
Endosulian sullate Endrin ketone	В	26458			36.48465		-9	15	~		
t Endrin ketone TCMX	B	28729			38.54614		-4	15			
Decachlorobiphenyl	В	20729	18071		32.69415		-18	15	C-		
,	В А	44103		unt=22)	J2.03413	ья	-18 11	15	-		
Average EPA 8081A	В			int=22)			7	15			
Average EPA 8081A			(00)	1111-221						-	

+=high bias -=low bias c=CCV rsd=ICAL %RSD failure Page 1 of 1

IDF : 1.0 Instid : GC16 Run Name : ccv

Standards: 04WS1633

alpha-BHC A 7979.0 9092.6 25.00000 28.48915 pg 1	4 15 3 15 6 15 3 15	rsd ***
gamma-BHC A 7843.4 8913.0 25.00000 28.40915 pg 1 beta-BHC A 4899.0 5022.0 25.00000 25.62745 pg	4 15 3 15 6 15 3 15	; ;
beta-BHC A 4899.0 5022.0 25.00000 25.62745 pg	3 15 6 15 3 15	;
	6 15 3 15	
delta_RHC A 8293 4 8817 9 25 00000 26 58131 pg	3 15	;
derica - 510		
Heptachlor A 7487.9 7695.1 25.00000 25.69161 pg		;
Aldrin A 7158.2 8125.8 25.00000 28.37944 pg 1	.4 15	5
Heptachlor epoxide A 7663.7 8614.3 25.00000 28.10072 pg	.2 15	` `
gamma-Chlordane A 8021.1 9068.4 25.00000 28.26444 pg 1	.3 15	5
alpha-Chlordane A 8009.6 9080.0 25.00000 28.34098 pg 1	.3 15	5
4,4'-DDE A 7169.0 8643.0 50.00000 60.28062 pg 2	1 15	C+ ***
Endosulfan I A 7216.7 8199.8 25.00000 28.40579 pg 1	.4 15	;
Dieldrin A 7299.6 8555.3 50.00000 58.60111 pg 1	.7 15	C+ ***
Endrin A 6481.9 7576.0 50.00000 58.44019 pg 1	.7 15	C+ ***
4,4'-DDD A 5691.7 6824.2 50.00000 59.94915 pg 2	10 15	C+ ***
Endosulfan II A 7078.8 7918.2 50.00000 55.92881 pg 1	.2 15	i
4,4'-DDT A 5316.9 5897.9 50.00000 55.46381 pg 1	.1 15	;
Methoxychlor A 2778.5 2545.6 250.0000 229.0420 pg -	8 15	5
Endosulfan sulfate A 6762.1 6844.5 50.00000 50.60972 pg	1 15	i
Endrin ketone A 7568.1 8148.1 50.00000 53.83171 pg	8 15	;
TCMX A 7232.1 7295.5 50.00000 50.43837 pg	1 15	;
Decachlorobiphenyl A 8258.9 7649.7 50.00000 46.31231 pg	7 15	i
alpha-BHC B 39455 39497 25.00000 25.02669 pg	0 15	;
gamma-BHC B 36068 37031 25.00000 25.66782 pg	3 15	j
	7 15	rsd ***
delta-BHC B 40327 37797 25.00000 23.43164 pg	6 15	;
Heptachlor B 24752 26529 25.00000 26.79507 pg	7 15	3
Aldrin B 33444 34333 25.00000 25.66472 pg	3 15	;
Heptachlor epoxide B 30710 31340 25.00000 25.51266 pg	2 15	;
gamma-Chlordane B 33862 35862 25.00000 26.47669 pg	6 15	5
alpha-Chlordane B 33070 34375 25.00000 25.98634 pg	4 19	5
4,4'-DDE B 29911 32070 50.00000 53.60855 pg	7 15	;
Endosulfan I B 29530 30411 25.00000 25.74561 pg	3 15	5
Dieldrin B 29633 30698 50.00000 51.79605 pg	4 15	5
Endrin B 25174 27437 50.00000 54.49472 pg	9 15	;
4,4'-DDD B 22737 25193 50.00000 55.40082 pg 1	.1 15	5
. ·	2 15	5
4,4'-DDT B 17382 19030 50.00000 54.73979 pg	9 15	5
Methoxychlor B 7476.3 7738.0 250.0000 258.7514 pg	4 15	5
Endosulfan sulfate B 25780 23068 50.00000 44.73943 pg -1	1 15	5
	-2 15	5
· · · · · · · · · · · · · · · · · · ·	13 15	5
	9 15	5
	LO 15	5
Average EPA 8081A B (count=22)	6 15	5

⁺⁼high bias c=CCV rsd=ICAL %RSD failure page 1 of 1

Standards: 04WS2052

Bornous and a relationary of the same and a s							
Analyte	ďЬ	Avg RF/CF	RF/CF	SpkAmt	QuantAmt	IInite %	D Max %D Flags
alpha-BHC	A	12201	12006		19.67932		
gamma-BHC	A	11024	10960		19.88351	1 3	
beta-BHC	A				20.58401		3 15
delta-BHC	A	10886	10568		19.41596		
Heptachlor	A	10553	11054		20.94849		5 15
Aldrin	A	10523	11047		20.99558		5 15
Heptachlor epoxide	A	9603.6			20.92991		5 15
gamma-Chlordane	A	9739.5			20.93882		5 15
alpha-Chlordane	A				20.94515		5 15
4,4'-DDE	A	9452.1			42.53787		6 15
Endosulfan I	A				20.63750	~ ~	3 15
Dieldrin	A	9758.5			42.49580	E-J	6 15
Endrin	A				41.95425	r J	5 15
4,4'-DDD	A				40.32805		1 15
Endosulfan II	A				39.13233	1.3	
4,4'-DDT	A				44.38221		
Methoxychlor	A				223.6456		
Endosulfan sulfate	A				43.48178		9 15
Endrin ketone	A				37.26202	E	
TCMX	A				40.79640	x	2 15 '
Decachlorobiphenyl	A				42.85969		7 15
alpha-BHC	В	11473	12118		21.12499	23	6 15
gamma-BHC	В	10009	10509		20.99896		5 15
å beta-BHC	В				21.08678		5 15
delta-BHC	В	10005	10393		20.77472		4 15
Heptachlor	В				20.77472		5 15
Aldrin	В				21.06861		5 15
Heptachlor epoxide	В				21.00001		5 15
gamma-Chlordane	В				20.80851		4 15
· -	В				20.78489	E -	4 15
alpha-Chlordane 4,4'-DDE	В				42.50068		6 15
					20.77515	1.0	4 15
Endosulfan I Dieldrin	B B				40.71593	<u> </u>	2 15
	В				37.97866	4 -	5 15
Endrin							
4,4'-DDD	В				38.15468		-
Endosulfan II	В				40.94019		2 15 5 15
4,4'-DDT	В				42.15535	1 0	
Methoxychlor	В				196.4985		
Endosulfan sulfate	В				40.19283		0 15
Endrin ketone	В				39.08163		
*TCMX	В				43.13222		8 15
Decachlorobiphenyl	В	4050.9			39.24600		2 15
Average EPA 8081A	A		-	unt=22)			5 15
Average EPA 8081A	В		(CO1	unt=22)			4 15

P ₄	5250550	Avg							
Analyte	Ch	RF/CF	RF/CF	SpkAmt	QuantAmt	Unit	s %D Max	, %D)	?lags
alpha-BHC	A	12201	12623	10.00000	10.34563	рg	3	15	
gamma-BHC	Α	11024	11529	10.00000	10.45793	pg	5	15	
beta-BHC	Α	4742.3	5135.7	10.00000	10.82939	pg	8	15	
delta-BHC	Α	10886	11282	10.00000	10.36386	pg	4	15	
Heptachlor	Α	10553	11226	10.00000	10.63733	pg	6	15	
Aldrin	A	10523	11259	10.00000	10.69872	pg	7	15	
Heptachlor epoxide	A	9603.6		10.00000	10.93607	pg	9	15	
gamma-Chlordane	Α	9739.5		10.00000	10.91358	pg	9	15	
alpha-Chlordane	Α	9366.3			10.88624		9	15	
4,4'-DDE	A	9452.1		20.00000	21.32871	pg	7	15	
Endosulfan I	Α	8659.7	9436.8		10.89741		9	15	
Dieldrin	Α				21.45552		7	15	
Endrin	Α				21.38348		7	1.5	
4,4'-DDD	A				21.23481		6	15	
Endosulfan II	A				21.03018		5	15	
4,4'-DDT	Α				21.76639		9	15	
Methoxychlor	A				109.8628		10	15	
Endosulfan sulfate	A				22.18431		11	15	
Endrin ketone	A				20.83277		4	15	
TCMX	A				21.05859		5	15	
Decachlorobiphenyl	A				21.40154		7	15	ŀ
alpha-BHC	В	11473			10.92219		9	15	
gamma-BHC	В	10009			10.84800		8	15	
beta-BHC	В				11.09393		11	15	
delta-BHC	В	10005			10.88931		9	15	
Heptachlor	В				10.99569		10	15	
Aldrin	В				11.13059		11	15	
Heptachlor epoxide	В				11.13990		11	15	
gamma-Chlordane	В				11.09128		11	15	
alpha-Chlordane	в				11.11727		11	15	
4 , 4 ' -DDE	в				21.85006		9	15	
Endosulfan I	В				11.19019		12	15	
*Dieldrin	В				21.60594		8	15	
Endrin	В	5569.5	5644.0	20.00000	20.26735	pg	1	15	
4,4'-DDD	В				21.03669		5	15]
Endosulfan II	В	6691.5	7228.9	20.00000	21.60593	pg	8	15	
4,4'-DDT	В				21.14265		6	15	į
! Methoxychlor	В				101.2492		1	15	
Endosulfan sulfate	В				21.36795		7	15	-
Endrin ketone	В				21.26653		6	15	İ
TCMX	В				22.00162		10	15	
Decachlorobiphenyl	в				20.02706		0	15	
Average EPA 8081A	Α			unt=22)			7	15	
Average EPA 8081A	В		(co	unt=22)			8	15	
 									

Soil SEQUENCE SUMMARY FOR 176111 8081 S Curtis & Tompkins Laboratories

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上上の一般の後上からとします。一日本の日本の日本の日本の日本の日、一十十年、日、日本の日、

Sequence: 234443043 Instrument: GC16 Analytical Method: EPA 8081A

Begun: 02-NOV-2004 Gas Chromatograph #16 ECD SOP Version: 8081_rv7

>LR																			
VL pH Stds Used	1	2	2	2		-			3	7	ın	2	9	7	80	6	<u>o</u>	10	1 10
IQC SPK uL						Н													2 1
ix Analyzed IDF	02-NOV-2004 16:03 1.0	02-NOV-2004 16:34 1.0	02-NOV-2004 17:05 1.0	02-NOV-2004 17:36 1.0	02-NOV-2004 18:42 1.0	02-NOV-2004 22:17 1.0	02-NOV-2004 22:48 1.0	02-NOV-2004 23:18 1.0	02-NOV-2004 23:49 1.0	03-NOV-2004 00:19 1.0	03-NOV-2004 00:50 1.0	03-NOV-2004 01:21 1.0	03-NOV-2004 01:52 1.0	03-NOV-2004 02:22 1.0	03-NOV-2004 02:54 1.0	03-NOV-2004 03:55 1.0	03-NOV-2004 04:25 1.0	03-NOV-2004 14:33 1.0	03-NOV-2004 15:12 1.0
num Batch Matrix Analyzed																			
Samplenum		pest_4	CCV	CCV	primer		hex	hex	pest_1	pest 2	pest_3	pest_4	pest 5	pest_6	pest_7	icv			icv
# Filename Type	006 307 006 PEM	007 307 007 CCV	008 307 008 X	009 307 009 X	010 307_010 X	017 307 017 PEM	018 307 018 X	019 307 019 X	020 307_020 ICAL	021 307 021 ICAL	022 307_022 ICAL		307 024	025 307_025 ICAL	026 307 026 ICAL	028 307 028 X	029 307_029 X	034 307 034 X	035 307 035 ICV

Stds used: 1=04WS1614 2=04WS1632 3=04WS1628 4=04WS1629 5=04WS1630 6=04WS1633 7=04WS1634 8=04WS1635 9=04WS1584 10=04WS2099

SEQUENCE SUMMARY FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Sequence: 234465868 Instrument: GC16 Gas Analytical Method: EPA 8081A

Gas Chromatograph #16 ECD
SOP Version: 8081_rv7

Begun: 18-NOV-2004

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			1777	Baccii Macrix Alialyzed	LUI	TAC 0517 AT	משפט פטיסי חד	אחיי
				12:28 1.	1.0		1	
Ώ	pest_4			18-NOV-2004 12:59 1.0			2	
Ũ	ccv			13:29 1.	1.0	4	1 2	
Ú	CCV			15:29 1.			2	
Ú	CCV			17:35 1.			2	
BLANK Q	QC272837	96630	Soil	18-NOV-2004 18:36 1.0	0.6618	٣		
Ó	QC272838	96630	Soil	19:07 1.	0.6676	2		
SAMPLE 1	176111-005	96630	Soil	19:37 1.	0.664	٣		
PEW .				20:38 1.	1.0		1	
Ďι	pest_3			21:09 1.			3	
ΰ	ccv			21:39 1.	1.0	m	1 3	
Ũ	ccv			22:10 1.			4	
Ω	med			22:40 1.			1	
SAMPLE 1	176064-019	96630	Soil	18-NOV-2004 23:41 1.0	0.6684		-	
SAMPLE 1	176064-020	96630	Soil	00:12 1.	0.6649			
SAMPLE 1	176064-021	96630	Soil	00:42 1.	0.657			
SAMPLE 1	176064-022	96630	Soil	01:13 1.	0.6645			
SAMPLE 1	176064-023	96630	Soil	01:43 1.	ø.		-	
SAMPLE 1	176064-024	96630	Soil	02:13 1.	0.6671		1	
SAMPLE 1	176064-025	96630	Soil	2004 02:44 1.	0.6579			
MSS 1	176064-026	96630	Soil	03:14 1.	0.6605	н	-	
SAMPLE 1	176064-027	96630	Soil	2004 03:45 1.	0.6667			
ч	hex			19-NOV-2004 04:15 1.0				
Ω	pem			-2004 04:46 1.	1.0		1 5	
<u>α</u>	pest_4			05:16 1.	1.0	9	1 2	
Ď X	ccv			.2004 05:47 1.	•		1 2	
				2004 06:17 1.	1.0		1 5	
SAMPLE 1	176065-001	96630	Soil	-2004 12:30 1.	0.6698	н		
SAMPLE 1	76065-002	96630	Soil	13:01 5.	0.6609	7	1	
rcs o	QC272838	96630	Soil	19-NOV-2004 13:36 1.0	0.6676	10	Н	
SAMPT,E	76065-003	96630	<u>ר</u>	19-NOV-2004 14:07 1.0	0 6676	,-	_	

Stds used: 1=04WS2193 2=04WS2052 3=04WS2051 4=04WS1633 5=04WS1614

SEQUENCE SUMMARY FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Sequence: 234465868 Instrument: GC16 Analytical Method: EPA 8081A

Gas Chromatograph #16 ECD SOP Version: 8081_rv7

Begun: 18-NOV-2004

>LR															
Stds Used				1	3	3	4	1			5	2	2	5	
IOC SPK uL	ᆏ	щ	Н	Н			Н		러	Н	Н	Н			
TOCI	Н	10	10				9		႕	Н		12			
PDF	0.6588	0.6707	0.6693	1.0			1.0		0.6631	0.6627	1.0	1.0			
IDF	19-NOV-2004 14:37 1.0	19-NOV-2004 16:09 1.0	04 16:39 1.0	19-NOV-2004 17:53 1.0	04 18:23 1.0	04 18:54 1.0	04 19:24 1.0	04 19:55 1.0	04 20:56 1.0	04 21:26 4.0	04 22:27 1.0	04 22:58 1.0	19-NOV-2004 23:28 1.0	19-NOV-2004 23:59 1.0	
Batch Matrix Analyzed	19-NOV-20	19-NOV-20	19-NOV-2004 16:39	19-NOV-20	19-NOV-2004 18:23	19-NOV-2004 18:54	19-NOV-2004 19:24	19-NOV-2004 19:55	19-NOV-2004 20:56	19-NOV-2004 21:26	19-NOV-2004 22:27	19-NOV-2004 22:58	19-NOV-20	19-NOV-20	
Matrix	Soil	Soil	Soil						Soil	Soil					
Batch	96630	96630	96630						96630	96630					
Samplenum	176085-001	QC272839	QC272840		pest_3	GCV	CCV	pem	176102-021	176102-022		pest 4	CCV	med	
e Type	SAMPLE	MS	MSD	DEM	^} F€C∧	×	/CCV	×	SAMPLE	SAMPLE	PEM	CCV	×	×	
# Filename Type	037 323 037	040 323 040	041 323 041	043 323 043	044 323 044 BCV	045 323 045 X	046 323 046/CCV	047 323 047	049 323 049	050 323 050	052 323 052	053 323 053	054 323 054	055 323 055	30

Stds used: 1=04WS2193 2=04WS2052 3=04WS2051 4=04WS1633 5=04WS1614

SEQUENCE SUMMARY FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Sequence: 244467602 Instrument: GC21 Analytical Method: EPA 8081A

Gas Chromatograph #21 ECD
SOP Version: 8081_rv7

Begun: 19-NOV-2004

d >LR	2:DDT44=261.779											
VL pH Stds Used	П			2	8	4	5	9	7	8	6	<u></u>
IQC SPK uL	П										н	
Batch Matrix Analyzed IDF	19-NOV-2004 17:22 1.0	19-NOV-2004 17:51 1.0	19-NOV-2004 18:20 1.0	19-NOV-2004 18:49 1.0	19-NOV-2004 19:19 1.0	19-NOV-2004 19:48 1.0	19-NOV-2004 20:17 1.0	19-NOV-2004 20:46 1.0	19-NOV-2004 21:15 1.0	19-NOV-2004 21:44 1.0	19-NOV-2004 22:42 1.0	19-NOV-2004 23:11 1.0
Samplenum		hex	hex	pest_1	pest 2	pest_3	pest 4	pest_5	pest_6	pest 7	I	icv
# Filename Type	002 324 002 PEM	003 324 003 X	004 324 004 X	005 324 005 ICAL			008 324 008 ICAL		010 324 010 ICAL	324 011		014 324 014 X

Stds used: 1=04WS2193 2=04WS1628 3=04WS1629 4=04WS2051 5=04WS2052 6=04WS2053 7=04WS1634 8=04WS1635 9=04WS2099

SEQUENCE SUMMARY FOR 176111 8081 Soil Curtis & Tompkins Laboratories

Sequence: 244471586 Instrument: GC21 Analytical Method: EPA 8081A

Gas Chromatograph #21 ECD SOP Version: 8081_rv7

Begun: 22-NOV-2004

sed >LR							
Stds U	1	2	2	1	_	3	5
IQC SPK uL Stds Used	П	Н		7	Н	Н	-
PDF	1.0	1.0		1.0	0.6676	1.0	
IDF	11:46 1.0	12:15 1.0	12:44 1.0	13:22 1.0	13:51 1.0	14:49 1.0	C . O . B .
Batch Matrix Analyzed	22-NOV-2004 11:46 1.0	22-NOV-2004 12:15 1.0	22-NOV-2004 12:44 1.0	22-NOV-2004 13:22 1.0	22-NOV-2004 13:51 1.0	22-NOV-2004 14:49 1.0	O L OLIST NOOC TOOK CC
Matris					Soil		
- 1					96630 Soil		
Samplenum		pest_4	CCV		QC272838		1
# Filename Type	003 327 003 PEM	004 327_004 ~CCV	005 327 005 X	006 327 006 X	007 327 007 LCS	009 327 009 PEM	1100 010 010

Stds used: 1=04WS2193 2=04WS2052 3=04WS1614 4=04WS2051

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Reporting Summary for 176111 8081 Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
176111-005	alpha-BHC	GC16	В	11/18/04 19:37
176111-005		GC16	A	11/18/04 19:37
176111-005	gamma-BHC	GC16	В	11/18/04 19:37
176111-005		GC16	A	
1	Heptachlor	GC16	Ą	·
176111-005		GC16	A	
	Heptachlor epoxide	GC16	A	
	Endosulfan I	GC16	A	
176111-005		GC16	A	•
176111-005		GC16	A	
176111-005	•	GC16	A	
	Endosulfan II	GC16	A	
	Endosulfan sulfate	GC16	A	•
176111-005		GC16	A	· ·
	Endrin ketone	GC16	Ā	
176111-005		GC16	B	
	Chlordane (Technical)	GC16	A	
•	alpha-Chlordane	GC16	В	
	gamma-Chlordane	GC16	В	
	Methoxychlor	GC16	A	
176111-005		GC16	Ā	
176111-005		GC16	Ā	
	Decachlorobiphenyl	GC16	Ā	11/18/04 19:37
1,0111-002	Decaciioropipileilyr	GCIO	A	11/10/04 19:37
QC272837	alpha-BHC	GC16		11/18/04 18:36
QC272837	beta-BHC	GC16		11/18/04 18:36
QC272837	gamma-BHC	GC16	Α	
QC272837	delta-BHC	GC16	A	
QC272837	Heptachlor	GC16	Α	
QC272837	Aldrin	GC16	Α	
QC272837	Heptachlor epoxide	GC16	Α	11/18/04 18:36
QC272837	Endosulfan I	GC16	Α	
QC272837	Dieldrin	GC16		
QC272837	4,4'-DDE	GC16	Α	
QC272837	Endrin	GC16		11/18/04 18:36
QC272837	Endosulfan II	GC16	Α	11/18/04 18:36
QC272837	Endosulfan sulfate	GC16	Α	11/18/04 18:36
QC272837	4,4'-DDD	GC16	Α	11/18/04 18:36
QC272837	Endrin ketone	GC16	A	·
QC272837	4,4'-DDT	GC16	Α	11/18/04 18:36
QC272837	Chlordane (Technical)	GC16	A	11/18/04 18:36
QC272837	alpha-Chlordane	GC16	Α	11/18/04 18:36
QC272837	gamma-Chlordane	GC16	Α	11/18/04 18:36
QC272837	Methoxychlor	GC16	A	11/18/04 18:36
QC272837	Toxaphene	GC16	Α	11/18/04 18:36
QC272837	TCMX	GC16	A	11/18/04 18:36
QC272837	Decachlorobiphenyl	GC16	A	11/18/04 18:36
00272020	Gamma - PUC	CC21	75	11/22/04 12-51
QC272838	gamma-BHC	GC21	<u> A</u>	11/22/04 13:51

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Reporting Summary for 176111 8081 Soil

Sample ID		Inst ID) Ch	Date & Time
QC272838	Heptachlor	GC21	A	11/22/04 13:51
QC272838	Aldrin	GC21	A	11/22/04 13:51
QC272838	Dieldrin	GC21	A	11/22/04 13:51
QC272838	Endrin	GC21	A	11/22/04 13:51
QC272838	4,4'-DDT	GC21	A	11/22/04 13:51
QC272838	TCMX	GC21	A	11/22/04 13:51
QC272838	Decachlorobiphenyl	GC21	A	11/22/04 13:51
QC272839	gamma DIIC	GC16	מ	11/19/04 16:09
QC272839	gamma-BHC		В	
,	Heptachlor Aldrin	GC16		11/19/04 16:09
QC272839		GC16	В	11/19/04 16:09
QC272839	Dieldrin	GC16	В	11/19/04 16:09
QC272839	Endrin	GC16	В	11/19/04 16:09
QC272839	4,4'-DDT	GC16	В	11/19/04 16:09
QC272839	TCMX	GC16		11/19/04 16:09
QC272839	Decachlorobiphenyl	GC16	A	11/19/04 16:09
QC272840	gamma-BHC	GC16	В	11/19/04 16:39
QC272840	Heptachlor	GC16	В	11/19/04 16:39
QC272840	Aldrin	GC16	В	11/19/04 16:39
QC272840	Dieldrin	GC16	В	11/19/04 16:39
QC272840	Endrin	GC16	В	11/19/04 16:39
QC272840	4,4'-DDT	GC16	В	11/19/04 16:39
QC272840	TCMX	GC16	В	11/19/04 16:39
QC272840	Decachlorobiphenyl	GC16	A	11/19/04 16:39

19-NOV-2004 10:23	Spike #1 ID : 04WS1994A Spike #2 ID : 04WS1551E Spike #3 ID : 8081ASE rv0	Sp. 2 Sp. 3 Anallyses Clean Comments Vol. Vol. Well Method Method 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 0 8081 36208 2 8081 36208 2 8081 36208 2 8081 36208 2 8081 </th <th></th>	
þ	5,50,515		
Sample Preparation Summary	Analysis: 8081 Bgroup: N/A Units: g	1x	
Curtis & Tompkins Laboratories	Batch Number : 96630 Date Extracted: 18-NOV-2004 Extracted by : Brook N. Buswell Prep Method : 3545	Sample Type Client Matr 176064-019 Innovative Technical Solutions Soil 176064-020 Innovative Technical Solutions Soil 176064-021 Innovative Technical Solutions Soil 176064-022 Innovative Technical Solutions Soil 176064-023 Innovative Technical Solutions Soil 176064-024 Innovative Technical Solutions Soil 176064-025 Innovative Technical Solutions Soil 176064-027 Innovative Technical Solutions Soil 176064-027 Innovative Technical Solutions Soil 176065-001 LFR Levine Fricke 176065-002 LFR Levine Fricke 176065-003 URS Corporation 176102-021 Baseline Environmental 176102-022 Treadwell & Rollo 17611-005 GCZ72838 MS of 176064-026 QCZ72839 MS QCZ72837 MS QCZ72839 MS QCZ72839 MS QCZ72839 MS QCZ72840 MSD QCZ72840 MSD	

10 MB Date: 11/19/ Reviewed By

Received by:

Relinquished By:_

Prep Chemist:_

Date: 11/19/00

Curtis & Tompkins, Ltd. LIMS Batch No: 96630 LIMS Analysis: 6081 Extracted by: 65	8081 SOIL PREP LO Extraction Method: □ EPA 3550b Sonication EPA 3545 PFE (Mth# © □ EPA 3540c Soxhlet	Cleanup Method: ☐ EPA 3640a GPC	Page 79
		Cleanup	
Sample # and letter MO 0C27253	Sample Wt (g) Final Vol (mL)	(x if needed) Comments	
ics 1 6	14,98	6+176064-026	
$\frac{m}{m}$ $\frac{\sqrt{3}}{\sqrt{3}}$	14,91-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	37 1160617 02:0	
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17462-024 V-022	15.67 15.08		
20 17-16111-065	15.05	<u> </u>	
	30 11°		
	Sand weighsdrout for QC sample		itials/Date BAMBOH
dried with CH;Gl;-rinsed. [2] gr	anular Na, SO ₄ Midianomaccous card gate solution was added to all sample	三つともんべることで	
C45 ml of :1 CH2Cl3 (lot# EA 902 f DAceton	spike solution was added to all spike	SOUPLINGSUE	AND LOSS IN THE STATE OF THE ST
☐ sonicated 3 times w/≥100mL.	Livers extracted Electric terms in	DES WHATMAN	
STATE OF STATE SEASONS SELECTION	Soxhlets on a Soxhlets of a	(VX/)	
Extracts filtered through ba	keft, CH5Cls, rinseit, powdered 98556 Exchanged 2x with Hexar	D. N. N. B.	BANIAIOS
Concentrated: 1 to volumes a	s noted above : 🖾 to clean-up volun	ne salata sa	
.Clean-up (if necessary):	□ GPC (see GPC run log) 🎉 Flore	sil <u>ate v Mulajor la</u>	
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	Continued from page	Reviewed	hv./Date

Benchbook # BK 1991

Page 69

Prep Chemist: ZZ Cleanup Date: 1/18/04

	Extraction Batch#	Initial Volume (mL)	Final Volume (mL)	Comments
Sample #	96630	1.0	10	
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Wilson Chemist / Date

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Reviewed by Date

Curtis & Tompkins, Ltd.

Florisil Cleanup

EPA 3620B

Prep Chemist: Cleanup Date: 11/22/09

Benchbook # BK 1991 Page 70

Final Initial Extraction Volume (mL) Sample # Batch# Volume (mL) Comments LCSQC 272 838 1.0 96630 , O 10 15 20 25 30

	Mfg & Lot # / Time / Program	Initials / Date
Extracts were cleaned up using Florisil cartridges	303-221 AZ LESPLED	DB 11 22 04
Florisil cartridges/ columns rinsed 3x with Hexane	(M222	<u> </u>
Extracts were eluted with 9.0 mL 9:1 Hexane/Acetone Hexane	4	
Acetone	44233 EM	
Concentrated to volumes as noted above	\`\	<i>\</i>

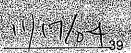
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Date ...



Curtis & Tompkins Laboratories MDL Summary for EPA 8081A Soil 3545

Analyte	Units	GC14B A	GC14B B	GC16 A	GC16 B	GC21. A.	GC21 B	GC23 A	GC23 B
gamma-BHC	ng/Kg	05/08/03 0.64	05/08/03 0.48	04/08/04 0.33	04/08/04 0.36	04/28/04 0.30	04/28/04 0.65	06/22/04 0.53	06/22/04 0.59
Heptachlor	ng/Kg	05/08/03 0.76	05/08/03 0.67	04/08/04 0.49	04/08/04 0.49	04/28/04 0.30	04/28/04 0.64	06/22/04 0.68	06/22/04 0.53
Aldrin	ug/Kg	05/08/03 0.56	05/08/03 0.60	04/08/04 0.94	04/08/04 0.41	04/28/04 0.70	04/28/04 0.74	06/22/04 0.56	06/22/04 0.58
Dieldrin	ug/Kg	05/08/03 0.57	05/08/03 0.51	04/08/04 0.51	04/08/04 0.64	04/28/04 0.67	04/28/04 0.75	06/22/04 1.3	06/22/04 1.5
Endrin	ng/Kg	05/08/03 0.65	05/08/03 0.54	04/08/04 0.65	04/08/04 0.67	04/28/04 0.74	04/28/04 0.68	06/22/04 1.7	06/22/04 1.6
4,4'-DDT	ug/Kg	05/08/03 1.2	05/08/03 0.74	04/08/04 1.8	04/08/04 1.2	04/28/04 1.8	04/28/04 0.58	06/22/04 1.6	06/22/04 1.7
alpha-BHC	ug/Kg	05/08/03 0.55	05/08/03 0.56	04/08/04 0.43	04/08/04 0.33	04/28/04 0.37	04/28/04 0.65	06/22/04 0.52	06/22/04 0.59
beta-BHC	ug/Kg	05/08/03 0.74	05/08/03 0.60	04/08/04 0.43	04/08/04 0.41	04/28/04 0.42	04/28/04 0.65	06/22/04 0.71	06/22/04 0.53
delta-BHC	ug/Kg	05/08/03 0.59	05/08/03 0.61	04/08/04 0.54	04/08/04 0.34	04/28/04 0.53	04/28/04 1.2	06/22/04 0.61	06/22/04 0.62
Heptachlor epoxide	ng/Kg	05/08/03 0.60	05/08/03 0.62	04/08/04 0.38	04/08/04 0.50	04/28/04 0.73	04/28/04 0.80	06/22/04 0.55	06/22/04 0.65
gamma-Chlordane	ug/Kg	05/08/03 0.57	05/08/03 0.55	04/08/04 0.55	04/08/04 0.47	04/28/04 0.78	04/28/04 0.63	06/22/04 0.57	06/22/04 0.72
alpha-Chlordane	ug/Kg	05/08/03 0.61	05/08/03 0.57	04/08/04 0.50	04/08/04 0.50	04/28/04 0.71	04/28/04 0.55	06/22/04 0.64	06/22/04 0.72
Endosulfan I	ug/Kg	05/08/03 0.50	05/08/03 0.55	04/08/04 0.86	04/08/04 0.89	04/28/04 1.4	04/28/04 1.2	06/22/04 0.78	06/22/04 0.76
4,4'-DDE	ug/Kg	05/08/03 0.54	05/08/03 0.50	04/08/04 0.53	04/08/04 0.53	04/28/04 0.86	04/28/04 0.72	06/22/04 1.2	06/22/04 1.6
Endosulfan II	ug/Kg	05/08/03 0.67	05/08/03 0.62	04/08/04 0.96	04/08/04 0.96	04/28/04 1.5	04/28/04 1.4	06/22/04 1.3	06/22/04 1.6
Endosulfan sulfate	ug/Kg	05/08/03 0.68	05/08/03 0.66	04/08/04 1.3	04/08/04 0.78	04/28/04 1.2	04/28/04 0.69	06/22/04 1.3	06/22/04 1.7
4,4'-DDD	ug/Kg	05/08/03 0.66	05/08/03 0.63	04/08/04 0.62	04/08/04 0.68	04/28/04 0.72	04/28/04 0.71	06/22/04 1.4	06/22/04 1.5
Erich aldehyde	ug/Kg	05/08/03 0.50	05/08/03 0.56	04/08/04 0.63	04/08/04 0.73	04/28/04 0.87	04/28/04 0.79	06/22/04 1.6	06/22/04 1.8
Endrin ketone	ug/Kg	05/08/03 0.83	05/08/03 0.65	04/08/04 1.6	04/08/04 0.82	04/28/04 1.2	04/28/04 0.79	06/22/04 1.3	06/22/04 1.6
Chlordane (Technical)	ug/Kg	04/17/04 15	04/17/04 13	04/09/04 4.8	04/09/04 3.8	04/30/04 6.1	04/30/04 6.2	06/23/04 3.1	06/23/04 5.0
Methoxychlor	ug/Kg	05/08/03 1.1	05/08/03 3.1	04/08/04 1.2	04/08/04 2.7	04/28/04 4.2	04/28/04 1.6	06/22/04 7.9	06/22/04 9.8
Toxaphene	ug/Kg	04/17/04 25	04/17/04 18	04/10/04 29	04/10/04 12	04/30/04 36	04/30/04 15	06/30/04 11	06/30/04 12

Page 1 of

PCBs



	Polychlorin	nated Biphenyls (PCBs)
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8082
Field ID:	BB3 COMP	Batch#:	96627
Matrix:	Soil	Sampled:	11/17/04
Units:	ug/Kg	Received:	11/17/04
Diln Fac:	1.000	Prepared:	11/18/04

Type: Lab ID: SAMPLE

176111-005

Basis: dry Moisture:

88

Analyzed: 11/19/04 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Aroclor-1016	ND	10	
Aroclor-1221	ND	21.	
Aroclor-1232	ND	10	
Aroclor-1242	ND	10	
Aroclor-1248	ND	10	
Aroclor-1254	ND	10	
Aroclor-1260	ND	10	

Surrogate	% P.T.C	Limite
TCMX	119	65-135
Decachlorobiphenyl	123	65-135

Type: Lab ID: Basis:

BLANK

QC272823 as received Analyzed:

11/18/04

Cleanup Method: EPA 3630C

Analyte	Result	RL	
Aroclor-1016	MD	9.6	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.6	
Aroclor-1242	ND	9.6	
Aroclor-1248	ND	9.6	
Aroclor-1254	ND	9.6	
Aroclor-1260	ND	9.6	

Surrogate	%REC	Limits
TCMX	118	65-135
Decachlorobiphenyl	122	65-135

ND= Not Detected RL= Reporting Limit Page 1 of 1



Batch QC Report

	Polychlorii	nated Biphenyls ((PCBs)
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC272824	Batch#:	96627
Matrix:	Soil	Prepared:	11/18/04
Units:	ug/Kg	Analyzed:	11/18/04
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked			Limits
Aroclor-1254	165.9	174.5	105	65-135

Surrogate	%REC	Limits
TCMX	112	65-135
Decachlorobiphenyl	116	65-135



Batch QC Report

	Polychlorin	nated Biphenyls ((PCBs)
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3545
Project#:	2893.12	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	96627
MSS Lab ID:	176011-002	Sampled:	11/12/04
Matrix:	Soil	Received:	11/12/04
Units:	ug/Kg	Prepared:	11/18/04
Basis:	dry	Analyzed:	11/19/04
Diln Fac:	4.000		

Type:

MS

Lab ID: QC272825 Moisture:

68

Cleanup Method: EPA 3630C

Analyte	MSS Result	Spiked	Result		Limits
Aroclor-1254	<19.15	174.6	448.3	257 *	65-135

Surrogate	%REC Limits	
TCMX	148 * 65-135	
Decachlorobiphenyl	164 * 65-135	

Type:

MSD

Lab ID: QC272826 Moisture: 6%

Cleanup Method: EPA 3630C

Analyte	Spiked		SREC	Limits	RPD	Lim
Aroclor-1254	177.5	392.9	221 *	65-135	15	35

	Surrogate	%RI	C	Limits
TCMX		142	*	65-135
Deca	chlorobiphenyl	157	*	65-135

^{*=} Value outside of QC limits; see narrative RPD= Relative Percent Difference Page 1 of 1

INITIAL CALIBRATION REPORT FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Name: Calnum: 204456284001 Instrument: GC06

Gas Chromatograph #6 ECD Type: (normal)

Reviewed By: MCH Date: 11-NOV-2004 20:44 Inj Vol (uL): 1

Calibration levels:

gg							
Standards	20:44 04WS1786	21:18 04WS1787	21:51 04WS1788	22:24 04WS1789	22:57 04WS1790	23:30 04WS1791	00:04 04WS1792
Analyzed	11-NOV-2004 20:44 04WS1786	11-NOV-2004 21:18 04WS1787	11-NOV-2004 21:51 04WS1788	11-NOV-2004 22:24 04WS1789	11-NOV-2004 22:57 04WS1790	11-NOV-2004 23:30 04WS1791	12-NOV-2004 00:04 04WS1792
Samplenum	pcb10_2	pcb25_5	pcb100_20	pcb250_50	pcb500_100	pcb750_150	pcblk_200
Segnum	204456284009	204456284010	204456284011	204456284012	204456284013	204456284014	204456284015
Filename Segnum	316 009	316_010	316_011	316_012	316_013	316_014	316_015
#	Н	~	m	4	۲V	9	7

											r^2		
Analyte	ch 1.1	1.2	L3 L4	1.4	1.5	7.6	17.	Type X a0	al a2	units	units avg &RSD	MnR 72	*RSD MNR^2 MXRSD Flags
Aroclor-1016 Peak # 1	A 261.48 241.89		254.35	221.65	239.37	241.18	224.28	AVRG R	0.004156	Бđ	240.60 6	- 99	20
Arocker-1016 Peak # 2	A 533.49	499.25	525.72	525.72 415.19 433.65	433.65	428.19	393.83	AVRG R	0.002168	Бđ	461.33 12	66.	20
Aroclor-1016 Peak # 3	A 564.73	533.69	549.22	458.79	502.50	495.49	465.89	AVRG R	0.001961	Бď	510.05 8	66.	20
Aroclor-1016 Peak # 4	A 242.53	237.94	243.00	237.94 243.00 205.66	232.89	231.63	220.30	AVRG R	0.004337	6	230.56 6	66.	20
Aroclor-1016 Peak # 5	A 103.40	209.91	187.31	156.99	172.29	171.77	160.49	AVRG R	0.006023	Бđ	166.02 20	99	20
Aroclor-1260 Peak # 1	A 268.40	246.51	258.02	213.38	233.79	224.81	212.27	AVRG R	0.004224	Бď	236.74 9	66.	20
Aroclox-1260 Peak # 2	A 376.99	357.86	338.29	277.22	313.06	301.86	290.13	AVRG R	0.003104	₽Ģ	322.20 11	66.	20
Aroclor-1260 Peak # 3	A 420.08 413.71	413.71	429.64	344.80	377.40	351.04	334.25	AVRG R	0.002621	Бđ	381.56 10	66.	20
Aroclor-1260 Peak # 4	A 599.44	404.88	489.66	374.38	418.02	388.99	373.66	AVRG R	0.002296	δď	435.58 19	66.	20
Aroclor-1260 Peak # 5	A 1155.8	1092.0	994.64	771.29	859.63	789.20	759.96	AVRG R	0.001090	Ъđ	917.50 18	66.	20
TCMX	A 13516	12108	11529	9793.1	10589	10651	10004	AVRG R	8.953E-5	Бď	11170 12	66.	20
Decachlorobiphenyl	4		10187	7756.8	8364.6	7334.6	7076.3	AVRG R	1.228E-4	Бď	8143.9 15	9.	20
Arocloz-1016 Peak # 1	B 473.52	445.14	452.81	426.78	418.49	427.42	380.14	AVRG R	0.002315	Бđ	432.04 7	66.	20
Aroclor-1016 Peak # 2	B 766.85	669.70	630.16	534.47	533.49	527.36	472.92	AVRG R	0.001693	₽Ç	590.71 17	66.	20
Aroclor-1016 Peak # 3	B 1878.2 1673.6	1673.6	1602.8	1404.9 1429.9	1429.9	1391.1	1277.9	AVRG R	6.568E-4	₽₫	1522.6 14	66.	20
Aroclor-1016 Peak # 4	B 398.83	380.82	383.28	439.40	459.90	455.53	423.28	AVRG R	0.002380	Бď	420.15 8	66.	20
Aroclor-1016 Peak # 5	B 572.52	549.99	549.41	458.42	469.07	454.38	417.50	AVRG R	0.002017	52	495.90 12	66.	20
Aroclor-1260 Peak # 1	B 1235.0	1244.3	1097.3	884.25	905.35	831.63	797.70	AVRG R	0.001001	Бď	999.37 19	66.	20
Aroclor-1260 Peak # 2	B 1402.9 1421.5 1383.1 1155.0 1218.0	1421.5	1383.1	1155.0	1218.0	1080.6	1062.5	AVRG R	8.024E-4	₽g	1246.2 12	.99	20

AVRG: Average response factor Curvea:

Instrument amount = a0 + response * a1 + response^2 * a2

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INITIAL CALIBRATION REPORT FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Instrument: GC06 Gas Chromatograph #6 ECD Calnum: 204456284001 Name:

Type: (normal)

Reviewed By: MCH Date: 11-NOV-2004 20:44 Inj Vol (uL): 1

Flags					
2 MXRSD	20	20	20	20	20
2 ⊃ MmR^	66.	66.	66.	66.	.99
r^2 a2 units avg %RSD MnR^2 MxRSD Flags	662.51 20	703.82 15	1443.3 20	19793 19	9422.9 19
unit	bd	Бd	Бď	Бđ	Бđ
a2					
a1	0.001509	0.001421	6.929E-4	5.052E-5	1.061E-4
L7 Type X a0	AVRG R	AVRG R	AVRG R	AVRG R	AVRG R
<i>171</i>	543.62 536.02 AVRG R	597.96	.184.5 1158.3 AVRG R	15914	- 1
L6	543.62	597.79	1184.5	17236	8255.5 7950.1
LS	600.39	657.60	1312.1	17565	9422.3
L4	580.23	620.14	1856.5 1777.6 1580.0 1233.9 1312.1	17308	12404 9082.8 9422.3
L3	708.74	813.93	1580.0	20877	12404
1.2	867.86	835.16	1777.6	23416	
Ch Li 1,2 1,3 L4 L5	B 800.72 867.86 708.74 580.23 600.39	B 804.18 835.16 813.93 620.14 657.60	B 1856.5	B 26232	В
	Aroclor-1260 Peak # 3	Aroclor-1260 Peak # 4	Aroclor-1260 Peak # 5		henyl
eti.	-1260	-1260	r-1260		Decachlorobiphenyl
Analyte	Aroclor	Aroclor	Aroclor	TOMX	Decachl

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INITIAL CALIBRATION 2ND SOURCE VALIDATION SUMMARY FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Instid : GC06

Calname :

ICV 204456284020 (316_020) standards: 04WS2171

Analyte	Ch	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max
Aroclor-1016	A	204456284020	12-NOV-2004	250.00	281.00	pg	12	15
Aroclor-1260	Α	204456284020	12-NOV-2004	250.00	259.47	pg	4	15
TCMX	Α	204456284020	12-NOV-2004	50.000	51.330	pg	3	15
Decachlorobiphenyl	Α	204456284020	12-NOV-2004	50.000	59.959	pg	20	15
Aroclor-1016	В	204456284020	12-NOV-2004	250.00	260.55	pg	4	15
Aroclor-1260	В	204456284020	12-NOV-2004	250.00	256.62	pg	3	15
TCMX	В	204456284020	12-NOV-2004	50.000	47.058	pg	-6	15
Decachlorobiphenyl	В	204456284020	12-NOV-2004	50.000	58.172	pg	16	15

INITIAL CALIBRATION REPORT FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Name: Calnum: 204461493001 Instrument: GC06

Gas Chromatograph #6 ECD

Type: (normal)

Date: 15-NOV-2004 12:43 Inj Vol (uL): 1 Reviewed By: MCH

Calibration levels:

Analyzed Samplenum ar1254 320_004 204461493004 Filename Segnum

#

Standards 15-NOV-2004 12:43 04WS2184

MnR^2 MxRSD Flags	20	20	20	20	20	20	20	20	20	20
MnR^2	. 99	66.	66.	66.	66.	99	66.	66.	66.	66.
τ^2 s avg %RSD	361.99 0	656.87 0	392.50 0	458.04 0	471.56 0	822.63 0	1102.5 0	715.23 0	1244.6 0	279.17 0
units	Бď	Бd	Бď	Бď	рд	рд	Бď	Бđ	Бď	þđ
a0 al a2	0.002762	0.001522	0.002548	0.002183	0.002121	0.001216	9.071B-4	0.001398	8.034E-4	0.003582
Type X	AVRG R	AVRG R	AVRG R	AVRG R						
ch L1	A 361.99	A 656.87	A 392.50	A 458.04	A 471.56	B 822.63	B 1102.5	B 715.23	B 1244.6	B 279.17
Analyte	Aroclor-1254 Peak # 1	Aroclor-1254 Peak # 2	Aroclor-1254 Peak # 3	Aroclor-1254 Peak # 4	Aroclor-1254 Peak # 5	Aroclor-1254 Peak # 1	Aroclor-1254 Peak # 2	Arc Arc 3	Aroclor-1254 Peak # 4	Aroclor-1254 Peak # 5

Analyte: Aroclor-1016

						A)	v g				
Instid	Ch	Segnum	Injected		Calnum	Caldate RF,	/CF RF/CF SpkAmt	QntAmt	Units %D	Max %D Flags	
GC06	A	204462984046	17-NOV-2004	18:51	204456284001	11-NOV-2004	500.00	498.70	pg 0	15	
GC06	В	204462984046	17-NOV-2004	18:51	204456284001	11-NOV-2004	500.00	510.86	pg 2	15	
GC06	A	204462984063	19-NOV-2004	01:54	204456284001	11-NOV-2004	250.00	233.17	pg -7	15	
GC06	В	204462984063	19-NOV-2004	01:54	204456284001	11-NOV-2004	250.00	254.24	pg 2	15	
GC06	A	204467216001	19-NOV-2004	10:56	204456284001	11-NOV-2004	250.00	229.38	pg -8	15	
GC06	В	204467216001	19-NOV-2004	10:56	204456284001	11-NOV-2004	250.00	235.55	pg -6	15	
GC06	A	204467216012	19-NOV-2004	17:43	204456284001	11-NOV-2004	500.00	537.76	pg 8	15	
GC06	В	204467216012	19-NOV-2004	17:43	204456284001	11-NOV-2004	500.00	554.16	pg 11	15	

Analyte: Aroclor-1254

							Avg			
Instid	C)h	Segnum	Injected		Calnum	Caldate	RF/CF RF/CF SpkAmt	QntAmt	Units %D	Max %D Flags
GC06	A	204462984048	17-NOV-2004	19:57	204461493001	15-NOV-2004	250.00	235.46	pg -6	15
GC06	В	204462984048	17~NOV~2004	19:57	204461493001	15-NOV-2004	250.00	246.16	pg -2	15
GC06	A	204462984065	19-NOV-2004	03:01	204461493001	15-NOV-2004	250.00	253.40	pg 1	15
GC06	В	204462984065	19-NOV-2004	03:01	204461493001	15-NOV-2004	250.00	251.51	pg 1	15
GC06	A	204467216002	19-NOV-2004	11:47	204461493001	15-NOV-2004	250.00	253.96	pg 2	15
GC06	В	204467216002	19-NOV-2004	11:47	204461493001	15-NOV-2004	250.00	250.63	pg 0	15
GC06	A	204467216014	19-NOV-2004	18:50	204461493001	15-NOV-2004	250.00	272.03	pg 9	15
GC06	В	204467216014	19-NOV-2004	18:50	204461493001	15-NOV-2004	250.00	271.37	pg 9	15

Analyte: Aroclor-1260

							Avg			
Instid	l Ch	Segnum	Injected		Calnum	Caldate F	RF/CF RF/CF SpkAmt	QntAmt	Units &D	Max %D Flags
GC06	A	204462984046	17-NOV-2004	18:51	204456284001	11-NOV-2004	500.00	476.47	pg -5	15
GC06	В	204462984046	17-NOV-2004	18:51	204456284001	11-NOV-2004	500.00	501.53	pg 0	15
GC06	A	204462984063	19-NOV-2004	01:54	204456284001	11-NOV-2004	250.00	228.55	pg -9	15
GC06	В	204462984063	19-NOV-2004	01:54	204456284001	11-NOV-2004	250.00	239.38	pg -4	15
GC06	A	204467216001	19-NOV-2004	10:56	204456284001	11-NOV-2004	250.00	234.86	pg -6	15
GC06	В	204467216001	19-NOV-2004	10:56	204456284001	11-NOV-2004	250.00	241.34	pg -3	15
GC06	A	204467216012	19-NOV-2004	17:43	204456284001	11-NOV-2004	500.00	504.02	pg 1	15
GC06	В	204467216012	19-NOV-2004	17:43	204456284001	11-NOV-2004	500.00	497.87	pg 0	15

Analyte: TCMX

							Avg					
Instid	Çh	Segnum	Injected		Calnum	Caldate	RF/CF	RF/CF	SpkAmt	QntAmt	Units %D	Max %D Flags
GC06	A	204462984046	17-NOV-2004	18:51	204456284001	11-NOV-2004	11170	10387	100.00	92.995	pg -7	15
GC06	В	204462984046	17-NOV-2004	18:51	204456284001	11-NOV-2004	19793	18094	100.00	91.419	pg -9	15
GC06	A	204462984063	19-NOV-2004	01:54	204456284001	11-NOV-2004	11170	9802.2	50.000	43.878	pg -12	15
GC06	В	204462984063	19-NOV-2004	01:54	204456284001	11-NOV-2004	19793	18021	50.000	45.524	pg -9	15
GC06	A	204467216001	19-NOV-2004	10:56	204456284001	11-NOV-2004	11170	9912.9	50.000	44.373	pg -11	15
GC06	₽	204467216001	19-NOV-2004	10:56	204456284001	11-NOV-2004	19793	17321	50.000	43.755	pg -12	15
GC06	Α	204467216012	19-NOV-2004	17:43	204456284001	11-NOV-2004	11170	11495	100.00	102.91	pg 3	15
GC06	В	204467216012	19-NOV-2004	17:43	204456284001	11-NOV-2004	19793	19863	100.00	100.35	pg 0	15

Analyte: Decachlorobiphenyl

						Av g				
Insti	d Ch	Segnum	Injected	Calnum	Caldate	RF/CF RF/CF	SpkAmt	QntAmt Unit	s %D Max %D Fl	aga
GC06	A	204462984046	17-NOV-2004	18:51 204456284001	11-NOV-2004	8143.9 7480.8	100.00	91.857 pg	-8 15	_
GC06	В	204462984046	17-NOV-2004	18:51 204456284001	11-NOV-2004	9422.9 9255.3	100.00	98.221 pg	-2 15	
GC06	A	204462984063	19-NOV-2004 (01:54 204456284001	11-NOV-2004	8143.9 7601.4	50.000	46.669 pg	-7 15	
GC06	В	204462984063	19-NOV-2004 (01:54 204456284001	11-NOV-2004	9422.9 9081.4	50.000	48.188 pg	-4 15	
GC06	A	204467216001	19-NOV-2004	10:56 204456284001	11-NOV-2004	8143.9 8048.3	50.000	49.413 pg	-1 15	
GC06	В	204467216001	19-NOV-2004	10:56 204456284001	11-NOV-2004	9422.9 9461.5	50.000	50.205 pg	0 15	
GC06	A	204467216012	19-NOV-2004	17:43 204456284001	11-NOV-2004	8143.9 7860.1	100.00	96.516 pg	-3 15	
GC06	В	204467216012	19-NOV-2004	17:43 204456284001	11-NOV-2004	9422.9 9270.3	100.00	98.382 pg	-2 15	

SEQUENCE SUMMARY FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Sequence: 204456284 Instrument: GC06 Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

Begun: 11-NOV-2004

F

>LR												
VL pH Stds Used		T	2	3	4	5	9	7	-	8	8	6
IOC SPK uL												П
IDF	04 20:11 1.0	11-NOV-2004 20:44 1.0	11-NOV-2004 21:18 1.0	11-NOV-2004 21:51 1.0	11-NOV-2004 22:24 1.0	11-NOV-2004 22:57 1.0	11-NOV-2004 23:30 1.0	12-NOV-2004 00:04 1.0	12-NOV-2004 01:10 1.0	12-NOV-2004 01:43 1.0	12-NOV-2004 02:17 1.0	12-NOV-2004 15:44 1.0
Batch Matrix Analyzed	11-NOV-2004 20:11	11-NOV-200	11-NOV-200	11-NOV-200	11-NOV-200	11-NOV-200	11-NOV-20C	12-NOV-20C	12-NOV-20C	12-NOV-20C	12-NOV-200	12-NOV-20C
Batch												
Samplenum	hex	pcb10_2	pcb25_5	pcb100 20	pcb250_50	pcb500 100	pcb750_150	$pcb1k_200$	hex	icv	icv	accu 1660
Type	×	ICAL	×	×	×	ıcv						
# Filename Type	316 008	316 009	010 316 010	011 316 011	316 012	013 316 013	014 316 014	015 316 015	017 316 017	018 316 018	019 316 019	020 316 020 ICV
#	900	600	010	011	012	013	014	015	017	018	019	020

Stds used: 1=04WS1786 2=04WS1787 3=04WS1788 4=04WS1789 5=04WS1790 6=04WS1791 7=04WS1792 8=04WS1609 9=04WS2171

SEQUENCE SUMMARY FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Sequence: 204461493 Instrument: GC06 Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

Begun: 15-NOV-2004

>LR				
VL pH Stds Used	1	2	8	3
IQC SPK uL	-		H	
Batch Matrix Analyzed IDF	15-NOV-2004 11:33 1.0	15-NOV-2004 12:07 1.0	15-NOV-2004 12:43 1.0	15-NOV-2004 13:17 1.0
Samplenum	pcb250_50	CCV	ar1254	CCV
# Filename Type	002 320 002 CCV	003 320_003 X	004 320_004 CCV	005 320 005 X

Stds used: 1=04WS2130 2=04WS1789 3=04WS2184

Н of

Page 1

SEQUENCE SUMMARY FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Sequence: 204462984 Instrument: GC06 Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

Begun: 16-NOV-2004

>. H	7-2004 12:57 1.0 1.7-2004 14:20 1.0 1.0 1.7-2004 19:08 1.0 0.7-2004 19:08 10:08	· T
•	7-2004 12:57 1.0 1. 7-2004 13:47 1.0 1. 7-2004 14:20 1.0 7.2004 19:08 1.0 0.	1
1.0	V-2004 13:47 1. V-2004 14:20 1. V-2004 19:08 1.	V-2004 12:57 1.
1.0	V-2004 14:20 1. V-2004 19:08 1.	-NOV-2004 13:47 1.
1.0	V-2004 19:08 1.	-NOV-2004 14:20 1.
1.0		2004 19:08 1.
1.0	V-2004 19:41 1.	-NOV-2004 19:41 1.
1.0	V-2004 20:14 1.	2004 20:14 1.
1.0	V-2004 20:48 1.	2004 20:48 1.
1.0	V-2004 21:21 1.	2004 21:21 1.
1.0	V-2004 21:54 1.	V-2004 21:54 1.
1.0	V-2004 22:28 1.	V-2004 22:28 1.
1.0	V-2004 23:01 1.	2004 23:01 1.
1.0	V-2004 23:34 1.	-2004 23:34 1.
1.0	-2004 00:08 1.	00:08 1.
1.0	7-2004 01:14 1.	-2004 01:14 1.
1.0	V-2004 01:47 1.	01:47 1.
1.0	7-2004 02:21 1.	7-2004 02:21 1.
1.0	7-2004 02:54 1.	02:54 1.
1.0	V-2004 04:00 1.	-2004 04:00 1.
1.0	V-2004 04:34 1.	-2004 04:34 1.
1.0	7-2004 05:07 1.	er 17-NOV-2004 05:07 1.
1.0	7-2004 05:40 1.	1 17-NOV-2004 05:40 1.
1.0	7-2004 06:13 1.	1 17-NOV-2004 06:13 1.
1.0	7-2004 07:20 1.	7-2004 07:20 1.
1.0	7-2004 07:53 1.	1 17-NOV-2004 07:53 1.
1.0	V-2004 09:00 1.	-2004 09:00 1.
1.0	V-2004 09:33 1.	-2004 09:33 1.
1.0	-2004 10:06 1.	2004 10:06 1.
1.0	10:39 1.	:39 1.
1.0	12:38 1.	12:38 1.
	V-2004 13:11	17-NOV-2004 13:11 1.

Stds used: 1=04WS2130 2=04WS2184 3=04WS2064

SEQUENCE SUMMARY FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Sequence: 204462984 Instrument: GC06 Gas Cl Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

16-NOV-2004
Begun:

>LR																									
Stds Used					3	3	2	2									1	1	2	2		3	3	2	2
K uL	Н	ᆏ	Н	ч	Н		Н		H	Н	ᅥ	Н	Н	Н	Н	Ч	Ц		Н						
IQC SPK uL	m	4												Н	4	9									
PDF	0.6623	0.6649	0.6734	0.6653	1.0		1.0		0.025	0.668	0.025	0.025	0.6636	0.6671	0.6566	0.6676	1.0		1.0						
IDF	15:31 1.0	16:04 4.0	17:11 1.0	17:44 1.0	18:51 1.0	19:24 1.0	19:57 1.0	20:30 1.0	19:15 1.0	19:48 1.0	20:21 1.0	20:54 1.0	21:28 1.0	22:34 4.0	23:41 4.0	00:47 4.0	01:54 1.0	02:27 1.0	03:01 1.0	03:34 1.0	05:47 1.0	06:54 1.0	07:27 1.0	08:01 1.0	08:34 1.0
Analyzed	17-NOV-2004	18-NOV-2004	19-NOV-2004																						
Matrix Anal	Soil	Soil	Soil	Soil					Water	Soil	Water	Water	Soil	Soil	Soil	Soil					Soil				
Batch	96527	96527	96527	96527					80996	96627	90996	96608	96627	96627	96627	96627					96627				
Samplenum	176012-001	176011-002	QC272413	QC272414	pcb500_100	CCV	ar1254	ccv	QC272733	QC272823	QC272734	QC272735	QC272824	176011-002	QC272825	QC272826	pcb250_50	CCV	ar1254	CCV	176111-005	pcb500_100	CCV	ar1254	CCV
Type	SAMPLE	SAMPLE	MS	MSD	CCV	×	CCV	×	BLANK	BLANK	BS	BSD	rcs	MSS	MS	MSD	CCV	×	CCV	×	SAMPLE	CCV	×	CCV	×
Filename Type	321 040	321 041	321_043	21 044	321 046	21_047	321 048	321 049	321 051	321 052	321_053	321 054	321 055	321 057	\$21 059	21 061	321 063	321_064	21	321_066	321_070	321_072	321_073	321_074	321 075
<u>н</u>	040 3	041 3	043 3	044 3	046 3	047 3		049 3	051 3	052 3	053 3					061 3	063 3	064 3	065 3	066 3	070	072 3	073 3	074 3	075 3

Stds used: 1=04WS2130 2=04WS2184 3=04WS2064

SEQUENCE SUMMARY FOR 176111 PCB Soil Curtis & Tompkins Laboratories

Sequence: 204467216 Instrument: GC06 Gas Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

Begun: 19-NOV-2004

>LR													1:XYL246=514.968							:PCB101=5645.12	7:PCB101=129710	:PCB101=4689.70				
Stds Used	1	2							13	3	12	12	1.							5	7	5:	-	L	2	2
IQC SPK uL	н	гH	H	r-t	н	 t	6 1	6 1	г		1		1 1	Н	Н	П	н	Н	Н	3		3		н	Н	
PDF	1.0	1.0	0.02358	0.02381	0.6596	0.6711	0.6566	0.6676	1.0		1.0		0.02358	0.02427	0.6618	0.6725	0.657	0.6716	0.6676	0.6739	0.6588	0.6653		1.0	1.0	
IDF	4 10:56 1.0	4 11:47 1.0	4 13:10 1.0	4 13:44 1.0	4 14:19 1.0	4 14:52 1.0	4 15:25 4.0	4 16:37 4.0	4 17:43 1.0	4 18:16 1.0	4 18:50 1.0	4 19:23 1.0	4 20:29 1.0	4 21:03 1.0	4 21:36 1.0	4 22:09 1.0	4 22:42 1.0	4 23:16 1.0	4 23:49 1.0	4 00:22 1.0	4 00:55 1.0	4 01:29 1.0	4 02:35 1.0	4 03:08 1.0	4 03:42 1.0	4 04:15 1.0
Batch Matrix Analyzed	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004	19-NOV-2004			20-NOV-2004	20-NOV-2004	20-NOV-2004	20-NOV-2004	20-NOV-2004	20-NOV-2004
Matrix			Water	Water	Soil	Soil	Soil	Soil					Water	Water	Soil	Soil	Soil	Soil	Miscel	Miscel	Soil	Soil				
Batch			96608	96608	96627	96627	96627	96627					96608	96608	96627	96627	96627	96627	96627	96627	96627	96627				
Samplenum	pcb250_50	ar1254	176101-001	176101-002	176111-005	176085-001	QC272825	QC272826	pcb500_100	CCV	ar1254	CCV	176043-002	176043-006	176023-001	176079-012	176079-013	176079-014	176098-001	176098-002	176102-022	176102-021	ccv	pcb250_50	ar1254	CCV
Type	CCV	CCV	SAMPLE	SAMPLE	SAMPLE	SAMPLE	MS	MSD	ממ	×	CCV	×	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	×	CCV	CCV	×
# Filename	001 324 001	002 324 002	004 324 004	005 324 005	006 324 006	007 324 007	008 324 008	010 324 010	012 324_012	013 324 013	014 324 014			018 324 018		020 324 020	021 324 021	022 324 022	023 324 023	024 324 024	025 324 025	026 324 026	028 324 028	029 324 029	030 324_030	031 324 031

Stds used: 1=04WS2130 2=04WS2184 3=04WS2064



Reporting Summary for 176111 PCB Soil

Sample ID		Inst ID	Ch	Date & Ti	
176111-005	Aroclor-1016	GC06	A	11/19/04	
176111-005	Aroclor-1221	GC06	Α	11/19/04	14:19
176111-005	Aroclor-1232	GC06	A	11/19/04	14:19
176111-005	Aroclor-1242	GC06	Α	11/19/04	14:19
176111-005	Aroclor-1248	GC06	Α	11/19/04	14:19
176111-005	Aroclor-1254	GC06	A	11/19/04	14:19
176111-005	Aroclor-1260	GC06	Α	11/19/04	14:19
176111-005	TCMX	GC06	Α	11/19/04	14:19
176111-005	Decachlorobiphenyl	GC06	Α	11/19/04	14:19
QC272823	Aroclor-1016	GC06	73	11/18/04	10.40
QC272823	Aroclor-1018 Aroclor-1221	GC06 GC06	A A	11/18/04	
QC272823	Aroclor-1221 Aroclor-1232	GC06	A	11/18/04	
QC272823	Aroclor-1232 Aroclor-1242	GC06 GC06	A	11/18/04	
QC272823	Aroclor-1242 Aroclor-1248	GC06		11/18/04	
QC272823	Aroclor-1248 Aroclor-1254	GC06	A A		
OC272823	Aroclor-1254 Aroclor-1260	GC06 GC06		11/18/04	
QC272823	TCMX	GC06	A		
QC272823		GC06	A A	11/18/04	
QC2/2023	Decachlorobiphenyl	GCU6	А	11/10/04	19:40
QC272824	Aroclor-1254	GC06		11/18/04	
QC272824	TCMX	GC06	Α	11/18/04	21:28
QC272824	Decachlorobiphenyl	GC06	A	11/18/04	21:28
QC272825	Aroclor-1254	GC06	Α	11/19/04	15.25
QC272825	TCMX	GC06	A		
QC272825	Decachlorobiphenyl	GC06	A	11/19/04	
20272023	pecaentor opthien A t	0000	n	11/15/04	10.20
QC272826	Aroclor-1254	GC06	Α	11/19/04	16:37
QC272826	TCMX	GC06	Α		
QC272826	Decachlorobiphenyl	GC06	Α	11/19/04	16:37

Curtis	Curtis & Tompkins Laboratories	Ω Ø	le Pre	para	mple Preparation Summary	ary	18-NOV-	18-NOV-2004 19:38	
Batch Number : Date Extracted: Extracted by : Prep Method :	96627 18-NOV-2004 Brook N. Buswell 3545	Analysis Bgroup Units Clean-up	lysis : oup ts an-up :	PCB N/A g		S S S S S S S S S S S S S S S S S S S	Spike #1 ID Spike #2 ID Spike #3 ID SOP Version	: 04WS1994B : 04WS2065A : PCB-ASE rv0	
Sample Type	Client	Matrix II	Init Units Final Prep	Final F		H Sp 1 Sp 2 Sp Vol Vol Vol	Clean pH Sp 1 Sp 2 Sp 3 Analyses D.F. Vol Vol Vol	Clean Comments Méthod	
	CHOM Hill Constructors Inc.	Soil . 1	.14.99 a	10	0.667111 1	.025 0	PCB	3630C mss	
1/6011-002	Warren George Inc		15.11 9	10 0	0.661813 1	.025 0	PCB	3630C	
1/6023-001	118 Corporation		14.87 g	10	0.672495 1	.025 0	PCB	36300	
1/60/9-012	IIDS Comparation	•	15.22 q	10	0.657030 1	.025 0	PCB	36300	
1760/9-UI3	IRS Cornoration	Soil . 1	14.89 q	10	0.671592 1	.025 0	PCB	3630C	
1/60/%-OI4	IRS Corporation	•	14.9 q	10	0.671141 1	.025 0	PCB	36300	
I/6083-001	Warran George Inc	ell		10	0.667557 1	.025 0	PCB	36300	
1/6098-001	Anticon Coordinates	•	14.84 G	10	0.673854 1	.025 0	PCB	36300	

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,	. 15.22 q	1 00 71	5	, 14.9 g	, 14.98 q	. 14.84 g	_ 15.03 g	. 15.18 g	, 15.16 q	. 14.97 g	- 15.07 g	, 15.23 g	7 14.98 g	
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on corporation	TRS Cornoration		UKS COLPOIALION	URS Corporation	Warren George Inc	Warren George Inc	Raseline Environmental	Baseline Environmental	Treaduell & Rollo			△₹ 136011_002	of 176011-002	
710-6/09/1	010000	1/60/3-013	176079-014	100-200361	T00-0000	100-960971	700-06021	1707-071	770-7019/1	n		QC272824 ICS	QC272825 MSD	

Reviewed By:

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Date: 11 18 M Date: 11/18/04

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Extraction Chemist / Date

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11/18/04

67

Read and Understood By

Signed.

Date



Curtis & Tompkins Laboratories MDL Summary for EPA 8082 Soil 3545

Analyte	Units GC06 A	GC06 A	GC06 B	GC14B A	GC14B B	GC21 A	GC21 B	GC22 A	GC22 B
Aroclor-1016	ug/Kg	12/19/03 3.9	12/19/03 9.0						04/07/04 2.7
Aroclor-1221	ug/Kg	04/10/04 18	04/10/04 15			05/13/03 17	05/13/03 21	04/19/04 12	04/19/04 12
Aroclor-1232	ug/Kg	02/18/04 4.0	02/18/04 4.8			04/07/03 4.9	04/07/03 1.7	02/17/04 8.5	02/17/04 8.8
Aroclor-1242	ug/Kg	02/18/04 5.5	02/18/04 5.1	05/04/04 4.1	05/04/04 3.5	07/30/03 5.6	07/30/03 5.1	01/15/04 3.2	01/15/04 1.9
Aroclor-1248	ug/Kg	12/11/03 3.1	12/11/03 3.4			04/08/03 2.0	04/08/03 1.9	01/23/04 3.2	01/23/04 7.8
Aroclor-1254	ug/Kg	11/02/04 4.4	11/02/04 3.7			08/02/03 2.3	08/02/03 2.0	10/30/04 4.0	10/30/04 2.9
Aroclor-1260	ug/Kg	12/19/03 3.9	12/19/03 3.9					04/07/04 2.2	04/07/04 2.5

METALS



	Californ	nia Title 26 Meta	ıls
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Field ID:	BB3 COMP	Batch#:	96610
Lab ID:	176111-005	Sampled:	11/17/04
Matrix:	Soil	Received:	11/17/04
Units:	mg/Kg	Prepared:	11/18/04
Basis:	dry	Analyzed:	11/18/04

Moisture:

88

Analyte	Result	RL	Diln Fac
Antimony	ND	2.4	1.000
Arsenic	4.3	0.20	1.000
Barium	390	0.40	1.000
Beryllium	0.66	0.079	1.000
Cadmium	0.69	0.20	1.000
Chromium	46	0.40	1.000
Cobalt	17	0.79	1.000
Copper	110	0.40	1.000
Iron	30,000	40	10.00
Lead	22	0.12	1.000
Manganese	2,300	4.0	10.00
Molybdenum	0.96	0.79	1.000
Nickel	61	0.79	1.000
Selenium	ND	0.20	1.000
Silver	ND	0.20	1.000
Thallium	ND	0.20	1.000
Vanadium	42	0.40	1.000
Zinc	58	0.79	1.000



Batch QC Report

Datell QC Re	F		
	Californ	nia Title 26 Meta	ils
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC272742	Batch#:	96610
Matrix:	Soil	Prepared:	11/18/04
Units:	mg/Kg	Analyzed:	11/18/04
Basis:	as received		

Analyte	Result	RL
Antimony	ND	3.0
Arsenic	ND	0.25
Barium	ND	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	ND	1.0
Copper	ND	0.50
Iron	ND	5.0
Lead	ND	0.15
Manganese	ND	0.50
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	ND	0.25
Silver	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	ND	1.0



Batch QC Report

	Californ	nia Title 26 Meta	ils
Lab #:	176111	Location:	Presidio Baker Beach 3
Client: Project#:	Treadwell & Rollo 2893.12	Prep: Analysis:	EPA 3050B EPA 6010B
Matrix: Units:	Soil mg/Kg	Batch#: Prepared:	96610 11/18/04
Basis: Diln Fac:	as received 1.000	Analyzed:	11/18/04

Type:

BS

Lab ID:

QC272743

Analyte	Spiked	Result	*REC	Limits
Antimony	100.0	100.0	100	75-125
Arsenic	50.00	52.00	104	75-125
Barium	100.0	101.5	102	75-125
Beryllium	2.500	2.570	103	75-125
Cadmium	10.00	10.30	103	75-125
Chromium	100.0	101.5	102	75-125
Cobalt	25.00	25.15	101	75-125
Copper	12.50	12.75	102	75-125
Iron	1,000	1,009	101	75-125
Lead	100.0	101.5	102	75-125
Manganese	25.00	25.05	100	75-125
Molybdenum	20.00	20.65	103	75-125
Nickel	25.00	25.45	102	75-125
Selenium	50.00	49.70	99	75-125
Silver	10.00	10.30	103	75-125
Thallium	50.00	51.00	102	75-125
Vanadium	25.00	25.65	103	75-125
Zinc	25.00	23.75	95	75-125

Type:

BSD

Lab ID:

QC272744

Analyte	Spiked	Result	SEC.		® R P D	
Antimony	100.0	100.0	100	75-125	0	30
Arsenic	50.00	50.00	100	75-125	4	30
Barium	100.0	99.50	100	75-125	2	30
Beryllium	2.500	2.525	101	75-125	2	30
Cadmium	10.00	10.00	100	75-125	3	30
Chromium	100.0	99.50	100	75-125	2	30
Cobalt	25.00	24.65	99	75-125	2	30
Copper	12.50	12.50	100	75-125	2	30
Iron	1,000	986.0	99	75-125	2	30
Lead	100.0	101.0	101	75-125	0	30
Manganese	25.00	24.55	98	75-125	2	30
Molybdenum	20.00	20.40	102	75-125	1	30
Nickel	25.00	24.85	99	75-125	2	30
Selenium	50.00	49.50	99	75-125	0	30
Silver	10.00	10.10	101	75-125	2	30
Thallium	50.00	49.85	100	75-125	2	30
Vanadium	25.00	25.10	100	75-125	2	30
Zinc	25.00	23.20	93	75-125	2	30



Batch OC Report

	Californ	nia Title 26 Meta	ils
Lab #: Client: Project#:	176111 Treadwell & Rollo 2893.12	Location: Prep: Analysis:	Presidio Baker Beach 3 EPA 3050B EPA 6010B
Field ID: MSS Lab ID: Matrix:	ZZZZZZZZZ 176109-002 Soil	Batch#: Sampled: Received: Prepared:	96610 11/16/04 11/17/04
Units: Basis: Diln Fac:	mg/Kg dry 1.000	Analyzed:	11/18/04 11/18/04

Type: Lab ID:

MS QC272745 Moisture:

7%

	1111				
Analyte	MSS Result	Spiked	Result	*REC	
Antimony	2.034	100.5	67.33	65 *	75-125
Arsenic	2.665	50.25	51 .7 5	98	75-125
Barium	35.36	100.5	133.7	98	75-125
Beryllium	0.1987	2.512	2.628	97	75-125
Cadmium	0.3799	10.05	10.35	99	75-125
Chromium	48.50	100.5	141.2	92	75-125
Cobalt	6.019	25.12	30.30	97	75-125
Copper	6.604	12.56	18.94	98	75-125
Iron	14,680	1,005	16,010 >LR	133 N	M 75-125
Lead	94.09	100.5	206.0	111	75-125
Manganese	213.3	25.12	241.2	111 N	M 75-125
Molybdenum	0.2191	20.10	19.70	97	75-125
Nickel	23.14	25.12	46.98	95	75-125
Selenium	<0.2043	50.25	48.34	96	75-125
Silver	<0.1183	10.05	9.899	99	75-125
Thallium	<0.2473	50.25	48.29	96	75-125
Vanadium	42.78	25.12	67.83	100	75-125
Zinc	41.73	25.12	62.81	84	75-125

Type: Lab ID:

MSD QC272746 Moisture:

7%

Analyte	Spiked	Result	%REC	Limits	RPD	
Antimony	112.0	75.04	65 *	75-125	0	30
Arsenic	56.00	57.68	98	75-125	1	30
Barium	112.0	146.7	99	75-125	1	30
Beryllium	2.800	2.929	98	75-125	1	30
Cadmium	11.20	11.42	99	75-125	1	30 30
Chromium	112.0	157.9	98	75-125	4	30
Cobalt	28.00	33.10	97	75-125	0	30
Copper	14.00	20.33	98	75-125	0	30 30
Iron	1,120	16,150 >LR	132 NM	75-125	NC	30
Lead	112.0	206.1	100	75-125	6	30 30 30 30 30
Manganese	28.00	241.4	100 NM	75-125	1	30
Molybdenum	22.40	22.01	97	75-125	0	30
Nickel	28.00	50.46	98	75-125	1	30
Selenium	56.00	53.54	96	75-125	1	30
Silver	11.20	11.03	99	75-125	0	30
Thallium	56.00	54.16	97	75-125	1	30 30 30
Vanadium	28.00	70.56	99	75-125	0	30
Zinc	28.00	64.96	83	75-125	1	30_

^{*=} Value outside of QC limits; see narrative NC= Not Calculated NM= Not Meaningful: Sample concentration > 4X spike concentration >LR= Response exceeds instrument's linear range RPD= Relative Percent Difference Page 1 of 1



Batch QC Report

	Californ	nia Title 26 Meta	ils
Lab #:	176111	Location:	Presidio Baker Beach 3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZ	Basis:	dry
Type:	Serial Dilution	Batch#:	96610
MSS Lab ID:	176109-002	Sampled:	11/16/04
Lab ID:	QC272747	Received:	11/17/04
Matrix:	Soil	Analyzed:	11/18/04
Units:	mg/Kg		

Moisture:

7%

Analyte	MSS Result	MSS RL	Result	RL	% Di	ff Lim	Diln Fac
Antimony	ND	3.506	1.4 Ј	18		10	5.000
Arsenic	2.665	0.2922	3.4	1.5		10	5.000
Barium	35.36	0.5844	34	2.9	5	10	5.000
Beryllium	0.1987	0.1169	0.44 J	0.58		10	5.000
Cadmium	0.3799	0.2922	0.45 J	1.5		10	5.000
Chromium	48.50	0.5844	47	2.9	3	10	5.000
Cobalt	6.019	1.169	5.9	5.8	2	10	5.000
Copper	6.604	0.5844	6.3	2.9	4	10	5.000
Iron	14,680	29.22	16,000	150	9	10	25.00
Lead	94.09	0.1753	91	0.88	3	10	5.000
Manganese	213.3	0.5844	200	2.9	4	10	5.000
Molybdenum	ND	1.169	ND	5.8		10	5.000
Nickel	23.14	1.169	22	5.8	3	10	5.000
Selenium	ND	0.2922	1.1 J	1.5		10	5.000
Silver	ND	0.2922	ND	1.5		10	5.000
Thallium	ND	0.2922	ND	1.5		10	5.000
Vanadium	42.78	0.5844	41	2.9	4	10	5.000
Zinc	41.73	1.169	41	5.8	3	10	5.000

J= Estimated value ND= Not Detected RL= Reporting Limit Page 1 of 1

POST DIGEST SPIKE USER REPORT Curtis & Tompkins Laboratories EPA 6010B

Instid : MET07 Instid : MET07

IDF : 1.0 IDF : 1.0 PDF : 54.35 PDF : 54.35 Run type : MSS Run type : PDS

Samplenum: 176109-002 Samplenum: QC272766

Matrix : Soil Matrix : Soil
Batchnum : 96610 Batchnum : 96610

Inj: 18-NOV-2004 12:46 Inj: 18-NOV-2004 13:00

Units : ug/L

Analyte	MSS	Spike Amt			Lim%Rec	Flags
Aluminum	89620	20000	106900 >LR		58-148	: >LR
Antimony	34.80	2000	1920	94	16-120	u
Arsenic	45.60	1000	994.0	95	62-120	u
Barium	605.0	2000	2500		51-137	u
Beryllium	3.400	50	49.80		70-120	u
Cadmium	6.500	200	196.0		61-120	u
Calcium	60940	20000	78900		40-149	
Chromium	830.0	2000	2690		60-120	u
Cobalt	103.0	500	566.0		56-120	u
Copper	113.0	250	347.0	94	47-144	u
Iron	*** usable	e MSS data not				
Lead	1610	2000	3550		47-126	u
Magnesium	39450	20000	58760		44-152	•
Manganese	3650	500	4080		62-131	: u
Molybdenum	3.750	400	398.0		57-120	u
Nickel	396.0	500	859.0		41-138	u
Selenium	ND	1000	970.0	97	35-122	u
Silver	ND	200	188.0	94	71-120	u
Thallium	ND	1000	954.0		53-120	u
Vanadium	732.0	500	1200		48-136	u
Zinc	714.0	500	1130	83	38-144	u
Titanium	*** usabl	e MSS data not	found ***			

Method: 6010B Standard: blank Run Time: 11/18/04 06:50:14

-.0014 .0004

.0001

-.0017

#1

#2

	•						
Elem Avge SDev %RSD	Sb2068 002 .001 39.3	Sb206A .003 .001 19.6	As1890 .000 .002 455.	Ba4934 .006 .000 2.84	Be3130 273 .000 .114	Cd2265 .004 .002 47.8	Cr2677 .001 .000 20.6
#1 #2	003 002	.002	001 .001	.006 .006	272 273	.006 .003	.001
Elem Avge SDev %RSD	Co2286 000 .001 1400.	Cu3247 .006 .001 10.4	Pb2203 .011 .001 10.7	Pb220A 003 .000 16.5	Mo2020 .002 .001 31.1	Ni2316 .004 .000 1.53	Se1960 007 .002 24.3
#1 #2	.000 001	.006 .007	.012 .010	003 002	.002	.004	005 008
Elem Avge SDev %RSD	Se196A .002 .001 41.3	Ag3280 001 .000 25.8	Tl1908 004 .001 36.0	V_2924 .001 .000 18.9	Zn2138 .034 .000 .081	Al3082 .0514 .0001 .2333	Ca31790017 .0001 3.844
#1 #2	.003	001 002	003 005	.001	.034	.0513 .0515	0016 0017
Elem Avge SDev %RSD	Fe27140016 .0002 14.69	Mg2790 .0002 .0002 98.09	Mn2576 .000 .001 94.5	Ti3349 .299 .001 .416		4 · · · · · · · · · · · · · · · · · · ·	

.298

.300

.001 .000

#1 #2

Method: 6010B Standard: cst hi Run Time: 11/18/04 06:54:03

Run Time	. 11/10/01	00.51.05					
Elem Avge SDev %RSD	Sb2068 .794 .006 .772	Sb206A .477 .001 .150	As1890 .166 .003 2.05	Ba4934 12.5 .0	Be3130 2.23 .01 .259	Cd2265 .772 .003 .420	Cr2677 .178 .000 .084
#1	.790	.477	.164	12.5	2.22	.770	.178
#2	.798	.476	.168	12.5	2.23	.775	.178
Elem	Co2286	Cu3247	Pb2203	Pb220A	Mo2020	Ni2316	Se1960
Avge	.523	.393	.586	.591	1.25	1.29	.181
SDev	.003	.000	.004	.002	.01	.01	.001
%RSD	.509	.059	.670	.358	.764	.396	.619
#1	.521	.392	.589	.590	1.24	1.28	.182
#2	.525	.393	.583	.593	1.26	1.29	.181
Elem	Se196A	Ag3280	T11908	V_2924	Zn2138	Al3082	Ca3179
Avge	.201	.230	.107	.677	.145	.1345	.2438
SDev	.004	.002	.003	.001	.000	.0005	.0006
%RSD	1.94	.845	2.80	.197	.296	.3480	.2414
#1	.198	.231	.105	.676	.145	.1348	.2434
#2	.204	.229	.109	.678	.145		.2442
Elem Avge SDev %RSD	Fe2714 .0882 .0006 .6947	Mg2790 .1289 .0005 .3920	Mn2576 .827 .002 .216	Ti3349 5.59 .01 .192			

5.58

5.60

.825 .828

.1286

.1293

.0878

.0886

page 1

Method:	6010B	Slo	pe = Conc(S	IR)/IR			
Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Star	ndardized
Sb2068	206.831	Multiple	Standards	1248.70	2.84751		06:54:03瓣
Sb206A	206.832	Multiple	Standards	2068.23	-5.56488	11/18/04	06:54:03
As1890	189.042	Multiple	Standards	3020.84	-1.03910	11/18/04	06:54:03
Ba4934	493.409	Multiple	Standards	79.8876	451179	11/18/04	06:54:03
Be3130	313.042	Multiple	Standards	38.6597	10.5403		06:54:03
Cd2265	226.502	Multiple	Standards	130.178	563678		06:54:03
Cr2677	267.716	Multiple	Standards	1127.24	651724		06:54:03
Co2286	228.616	Multiple	Standards	958.881	.046342		06:54:03
Cu3247	324.754	Multiple	Standards	517.667	-3.24128		06:54:03
Pb2203	220.351	Multiple	Standards	870.288	-9.58724		06:54:03
Pb220A	220.352	Multiple	Standards	834.747	2.17852	11/18/04	06:54:03
Mo2020	202.030	Multiple	Standards	801.304	-1.66628	11/18/04	06:54:0
Ni2316	231.604	Multiple	Standards	389.601	-1.55693		06:54:0
Se1960	196.021	Multiple	Standards	2658.92	17.6427		06:54:03
Se196A	196.022	Multiple	Standards	2516.45	-5.73864		06:54:03
Ag3280	328.068	Multiple	Standards	432.561	.578300		06:54:03
T11908	190.864	Multiple	Standards	4538.49	16.9263		06:54:03
V 2924	292.402	Multiple	Standards	739.592	537179	11/18/04	06:54:03
Zn2138	213.856	Multiple	Standards	927.186	-31.3252		06:54:03
A13082	308.215	Multiple	Standards	12257.5	-630.089		06:54:0
Ca3179	317.933	Multiple	Standards	8148.05	13.5883	11/18/04	06:54:0
Fe2714	271.441	Multiple	Standards	11662.0	18.0970		06:54:03
Mg2790	279.079	Multiple	Standards	15530.6	-3.33976		06:54:03
Mn2576	257.610	Multiple	Standards	121.082	060083	11/18/04	06:54:03
Pb sum	220.353	NONE	NONE	1.00000	.000000	*11/18/04	06:54:03
Sb sum	206.838	NONE	NONE	1.00000	.000000	*11/18/04	06:54:03
Se sum	196.026	NONE	NONE	1.00000	.000000		06:54:03
Ti3349	334.941	Multiple	Standards	188.986	-56.5185	11/18/04	06:54:03

INITIAL CALIBRATION CHECK STANDARD Curtis & Tompkins Laboratories

Instid : MET07

Segnum : 74465537001

Run Name :

Filename: tr255180

Injected : 18-NOV-2004 06:57
Caltype :

Analyte	SpkAmt	QuantAmt			Max %D Flags
Aluminum		985.4000		-1	5
Antimony		990.0000		-1	5
Arsenic		502.0000		0	5
Barium		993.0000		-1	5 5 5
Beryllium	100.0000	100.0000	ug/L	0	5
Cadmium		100.0000		0	5
Calcium		2009.000		0	5 5
Chromium		200.0000		0	
Cobalt		500.0000		0	5
Copper	200.0000	200.0000	ug/L	0	5 . 5
Iron		997.1000		0	5
Lead		497.0000		-1	5 5
Magnesium		2007.000		0	
Manganese		99.90000		0	5 5 5
Molybdenum		1000.000		0	5
Nickel		499.0000		0	
Selenium		494.0000		-1	5
Silver		99.40000		-1	5 5
Thallium	500.0000	500.0000	ug/L	0	5
Titanium		997.0000		0	5
Vanadium		499.0000		0	5
Zinc	100.0000	100.0000	ug/L	• • 0	5

SECOND SOURCE CALIBRATION VERIFICATION Curtis & Tompkins Laboratories

: MET07 Instid Run Name :

Injected : 18-NOV-2004 07:06
Caltype : Segnum : 74465537002 Filename : tr255181

Analyte	SpkAmt	QuantAmt			Max Fl	ags
Aluminum		496.8000			10	
Antimony	500.0000	494.0000	ug/L	-1	10	
Arsenic	250.0000	249.0000	\mathtt{ug}/\mathtt{L}	0	10	
Barium	500.0000	490.0000	ug/L	-2	10	
Beryllium	50.00000	49.40000	ug/L	-1	10	
Cadmium	50.00000	49.80000	ug/L	0	10	
Calcium	1000.000	1039.000	ug/L	4	10	
Chromium	100.0000	99.80000	ug/L	0	10	
Cobalt	250.0000	244.0000	ug/L	4 0 -2	10	
Copper	100.0000	101.0000	ug/L	1	10	
Iron	500.0000	530.7000	ug/L	1 6 -1 1 -2	10	
Lead	250.0000	248.0000	ug/L	-1	10	
Magnesium	1000.000	1014.000	ug/L	1	10	
Manganese	50.00000	49.20000	ug/L		10	
Molybdenum	500.0000	503.0000	ug/L	1	10	
Nickel	250.0000	247.0000	ug/L		10	
Selenium	250.0000	249.0000	ug/L	0.	10	
Silver	50.00000	51.80000	ug/L	4	10	
Thallium	250.0000	246.0000	ug/L	-2	10	•
Titanium	500.0000	508.0000	ug/L	2	10	
Vanadium	250.0000	247.0000	ug/L	-1	10	
Zinc		50.60000		1	10	· · · · · · · · · · · · · · · · · · ·

LOW-LEVEL PERFORMANCE VERIFICATION STANDARD Curtis & Tompkins Laboratories

Instid : MET07 Run Name :

Injected : 18-NOV-2004 07:31
Caltype : Seqnum : 74465537004 Filename : tr255183

Analyte	SpkAmt	QuantAmt	Units		ax %D Flags	
Aluminum		110.4000		10	50	
Antimony		59.80000		0	50	
Arsenic		3.200000				
Barium		9.780000				
Beryllium		1.970000				
Cadmium		5.000000		0	50	
Calcium		242.1000				
Chromium		10.60000		6	50	
Cobalt		19.40000				
Copper		11.60000			50	
Iron		121.3000				
Lead		3.470000		16		
Magnesium		209.0000			50	
Manganese		10.10000			50	
Molybdenum	20.00000	18.10000	\mathtt{ug}/\mathtt{L}	-10		
Nickel		19.40000				
Selenium		4.770000				
Silver	5.000000	5.790000	ug/L			
Thallium		5.210000		4	50	
Vanadium		9.920000		-1	50	
Zinc	20.00000	22.00000	ug/L	10	50	

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Run Name : IDF : 1.0

Segnum : 74465537012 Filename : tr255191 Injected : 18-NOV-2004 08:30

Caltype :

Analyte RF/C		QuantAmt				F1.	ags
Aluminum	500.0000			-3	10		
Antimony		506.0000		1	10		
Arsenic	250.0000	248.0000	ug/L	-1	10		
Barium		500.0000		0	10		
Beryllium	50.00000	49.20000	ug/L	-2	10		
Cadmium	50.00000	50.60000	ug/L	1	10		
Calcium	1000.000	1066.000	ug/L	7	10		
Chromium		101.0000		1	10		
Cobalt	250.0000	246.0000	ug/L	-2	10		
Copper	100.0000	101.0000	ug/L	1	10		
Iron	500.0000	553.9000	ug/L	11	10	C+	**
Lead		252.0000		1	10		
Magnesium	1000.000	1091.000	ug/L	9	10		
Manganese	50.00000	49.20000	\mathtt{ug}/\mathtt{L}	-2	10		
Molybdenum	500.0000	501.0000	ug/L	0	10		
Nickel	250.0000	249.0000	ug/L	0	10		
Selenium	250.0000	250.0000	ug/L	0	10		
Silver	50.00000	52.60000	ug/L	5	10		
Thallium	250.0000	242.0000	ug/L	-3	10		
Titanium	500.0000	515.0000	ug/L	3	10		
Vanadium	250.0000	249.0000	ug/L	0	10		
Zinc	50.00000	52.40000	ug/L	5	10		

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Run Name : IDF : 1.0

Segnum : 74465537024 Filename : tr255204 Injected : 18-NOV-2004 09:34

Caltype :

Analyte	RF/CF SpkAmt	QuantAmt	Unita	%D Max	- & D	opi
Aluminum	8. a - 5. a - 6. a	717.0000		-4	<u>راه</u> د	гладъ
Antimony		747.0000		0	10	
Arsenic		378.0000		1	10	
Barium		728.0000		-3	10	
Beryllium		75.60000		1	10	
Cadmium		72.70000		-3	10	
		1554.000		- 3 4	10	
Calcium		152.0000		1		
Chromium				-1	10	
Cobalt		371.0000			10	
Copper		149.0000		-1	10	
Iron		776.1000		3	10	
Lead		372.0000		-1	10	
Magnesium		1668.000		11	10	C+ **
Manganese		76.00000		1	10	
Molybdenum		754.0000		1	10	
Nickel		367.0000		-2	10	
Selenium		369.0000		-2	10	
Silver	75.00000	75.30000		0	10	
Thallium	375.0000	365.0000	ug/L	-3	10	
Titanium	750.0000	778.0000	ug/L	4	10	
Vanadium	375.0000	374.0000	ug/L	0	10	
Zinc	75.00000	74.40000	ug/L	-1	10	

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Run Name :

IDF : 1.0 Injected : 18-NOV-2004 10:30 Filename : tr255216 Segnum : 74465537036

Caltype :

Analyte	RF/CF SpkAmt	QuantAmt	Unite	%D Mav	%D Flags
Aluminum		459.8000		-8	10
Antimony		498.0000		Ō	10
Arsenic		242.0000		-3	10
Barium	500.0000	484.0000	ug/L	-3	10
Beryllium		50.90000		2	10
Cadmium		48.20000		-4	10
Calcium		1016.000		2	10
Chromium		102.0000		2	10
Cobalt		248.0000		-1	10
Copper		98.40000		-2	10
Iron		546.4000		9	10
Lead		253.0000		1	10
Magnesium		1075.000		8	10
Manganese		49.30000		-1	10
Molybdenum		498.0000		0	10
Nickel		245.0000		-2	10
Selenium		251.0000		0	10
Silver		51.10000		2	10
Thallium		243.0000		-3	10
Titanium		524.0000		5	10
Vanadium		250.0000		0	10
Zinc	50.00000	52.90000	ug/L	6	10

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Run Name : IDF : 1.0

Segnum : 74465537044 Filename : tr255225 Injected : 18-NOV-2004 12:28

Caltype :

Analyte R	F/CF SpkAmt	QuantAmt	Units	응D Ma	ax %D Flags
Aluminum		732.7000	ug/L	-2	10
Antimony		745.0000		-1	10
Arsenic		362.0000		-3	10
Barium		726.0000		-3	10
Beryllium		72.80000		-3	10
Cadmium		73.40000		-2	10
Calcium		1455.000		-3	10
Chromium		147.0000		-2	10
Cobalt		357.0000		-5	10
Copper		145.0000		-3	10
Iron		728.9000		- 3	10
Lead		368.0000		-2	10
Magnesium		1461.000		-3	10
Manganese		71.40000		-5	10
Molybdenum		743.0000		-1	10
Nickel		363.0000		-3	10
Selenium		365.0000	•	-3	10
Silver		73.30000		-2	10
Thallium		356.0000	- .	-5	10
Titanium		749,0000	— .	0	10
Vanadium		361.0000		-4	10
Zinc	75.00000	71.20000	ug/L	-5	10

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07

Run Name :

TDF : 1.0

Segnum : 74465537056

Filename: tr255237

Injected: 18-NOV-2004 13:29

Caltype :

					o
Analyte RF/		QuantAmt			ax %D Flags
Aluminum		499.7000	• .	0	10
Antimony		496.0000		-1	10
Arsenic		251.0000		0	10
Barium		500.0000		0	10
Beryllium		49.70000		-1	10
Cadmium		52.20000		4	10
Calcium	1000.000	993.5000	ug/L	-1	10
Chromium	100.0000	101.0000	\mathtt{ug}/\mathtt{L}	1	10
Cobalt	250.0000	247.0000	\mathtt{ug}/\mathtt{L}	-1	10
Copper	100.0000	96.60000	\mathtt{ug}/\mathtt{L}	-3	10
Iron		535.3000		7	10
Lead	250.0000	253.0000	\mathtt{ug}/\mathtt{L}	1	10
Magnesium	1000.000	1024.000	\mathtt{ug}/\mathtt{L}	2	10
Manganese	50.00000	52.20000	ug/L	4	10
Molybdenum	500.0000	499.0000	ug/L	0	10
Nickel	250.0000	255.0000	ug/L	2	10
Selenium	250.0000	248.0000	ug/L	-1	10
Silver	50.00000	51.00000	ug/L	2	10
Thallium	250.0000	247.0000	ug/L	-1	10
Titanium	500.0000	516.0000	ug/L	3	10
Vanadium		247.0000		-1	10
Zinc	50.00000	52.60000	ug/L	5	10

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07

Run Name :

Injected: 18-NOV-2004 14:29

Segnum : 74465537068

Filename : tr255249

Caltype :

	/a= a 13		77	05.5	
Analyte	RF/CF SpkAmt				Max %D Flags
Aluminum		733.1000		-2	10
Antimony		743.0000		-1	10
Arsenic		379.0000		1	10
Barium		744.0000		-1	10
Beryllium		73.20000		-2	10
Cadmium	75.00000	78.30000	ug/L	4	10
Calcium	1500.000	1434.000	ug/L	-4	10
Chromium	150.0000	149.0000	ug/L	-1	10
Cobalt	375.0000	365.0000	${\tt ug/L}$	-3	10
Copper		140.0000		-7	10
Iron	750.0000	751.7000	ug/L	Ö	10
Lead	375.0000	379.0000	ug/L	1 1	10
Magnesium	1500.000	1509.000	\mathtt{ug}/\mathtt{L}		10
Manganese	75.00000	71.50000	ug/L	-5	10
Molybdenum	750.0000	750.0000	ug/L	0	10
Nickel	375.0000	379.0000	ug/L	1	10
Selenium	375.0000	378.0000	ug/L	1	10
Silver	75.00000	72.50000	ug/L	-3	10
Thallium	375.0000	373.0000	ug/L	-1	10
Titanium	750.0000	756.0000	ug/L	1	10
Vanadium	375.0000	362.0000	ug/L	-3	10
Zinc		74.70000		0	10

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Run Name :

IDF : 1.0 Injected : 18-NOV-2004 15:51 Segnum : 74465537080 Filename : tr255261

Caltype :

Analyte RF/C	F SpkAmt	QuantAmt	Unite	%D Ma	ax %D Flags
Aluminum		523.6000		5	10
Antimony		512.0000		2	10
Arsenic		259.0000		4	10
Barium	500.0000	514.0000	ug/L	3	10
Beryllium	50.00000	50.00000	ug/L	0	10
Cadmium	50.00000	54.60000	ug/L	9	10
Calcium	1000.000	943.3000	ug/L	-6	10
Chromium		102.0000		2	10
Cobalt	250.0000	249.0000	ug/L	0	10
Copper		94.50000		-6	10
Iron		508.4000		2	10
Lead		256.0000		2	10
Magnesium		1013.000		1	10
Manganese		47.80000		-4	10
Molybdenum		501.0000		0	10
Nickel		264.0000		6	10
Selenium		253.0000		1	10
Silver		50.50000		1	10
Thallium		253.0000		1	10
Titanium		512.0000		2	10
Vanadium		245.0000		-2	10
Zinc	50.00000	51.60000	ug/L	3	10

Instrument: MET07

TJA Trace ICP

Segnum: 74465537003

Run Name:

Filename: tr255182

Run Type: ICB

Injected: 18-NOV-2004 07:13

Analyte	QuantAmt		Units	<u> </u>
Aluminum	ND	100.0000		<rl< td=""></rl<>
Antimony	ND	60.00000		<rl< td=""></rl<>
Arsenic	ND	5.000000	_ · ·	<rl< td=""></rl<>
Barium	ND	10.00000	— • .	<rl< td=""></rl<>
Beryllium	ND	2.000000	ug/L	<rl< td=""></rl<>
Cadmium	ND	5.000000	ug/L	<rl< td=""></rl<>
Calcium	ND	500.0000	ug/L	<rl< td=""></rl<>
Chromium	ND	10.00000	ug/L	<rl< td=""></rl<>
Cobalt	ND	10.00000	ug/L	<rl< td=""></rl<>
Copper	ND	10.00000	ug/L	<rl< td=""></rl<>
Iron	[11.730]	100.0000	ug/L	<rl< td=""></rl<>
Lead	ND	3.000000	${\tt ug/L}$	<rl< td=""></rl<>
Magnesium	ND	500.0000	\mathtt{ug}/\mathtt{L}	<rl< td=""></rl<>
Manganese	ND	10.00000	\mathtt{ug}/\mathtt{L}	<rl< td=""></rl<>
Molybdenum	ND	20.00000	ug/L	<rl< td=""></rl<>
Nickel	ND	20.00000	ug/L	<rl< td=""></rl<>
Selenium	ND	5.000000	ug/L	<rl< td=""></rl<>
Silver	ND	5.000000	ug/L	<rl< td=""></rl<>
Thallium	[4.9200]	5.000000	ug/L	<rl< td=""></rl<>
Titanium	[2.8000]	10.00000	ug/L	<rl< td=""></rl<>
Vanadium	ND	10.00000	ug/L	<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

Instrument: MET07

TJA Trace ICP

Segnum: 74465537013

Run Name:

Filename: tr255192

Run Type: CCB

Injected: 18-NOV-2004 08:37

		<u></u>	····		
Analyte	QuantAmt		Jnits	Req Flags	
Aluminum	ND	100.0000 ι	- .	<rl< td=""><td></td></rl<>	
Antimony	ND	60.00000 i		<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000 t		<rl< td=""><td></td></rl<>	
Barium	ND	10.00000 ι		<rl< td=""><td></td></rl<>	
Beryllium	[0.4160]			<rl< td=""><td></td></rl<>	
Cadmium	ND	5.000000 i	ug/L	<rl< td=""><td></td></rl<>	
Calcium	[51.080]	500.0000 t	ug/L	<rl< td=""><td></td></rl<>	
Chromium	ND	10.00000 ι	ug/L	<rl< td=""><td></td></rl<>	
Cobalt	NĎ	10.00000 ι	ug/L	<rl< td=""><td></td></rl<>	
Copper	ND	10.00000 ι	ug/L	<rl< td=""><td></td></rl<>	
Iron	[12.220]	100.0000 ι	ug/L	<rl< td=""><td></td></rl<>	
Lead	ND	3.000000 t		<rl< td=""><td></td></rl<>	
Magnesium	[8.8010]	500.0000 ι		<rl< td=""><td></td></rl<>	
Manganese	ND	10.00000 t	ug/L	<rl< td=""><td></td></rl<>	
Molybdenum	[6.1300]	20.00000 t	ug/L	<rl< td=""><td></td></rl<>	
Nickel	ND	20.00000 t		<rl< td=""><td></td></rl<>	
Selenium	ND	5.000000 t	ug/L	<rl< td=""><td></td></rl<>	
Silver	ND	5.000000 t		<rl< td=""><td></td></rl<>	
Thallium	ND	5.000000 t	ug/L	<rl< td=""><td></td></rl<>	
Titanium	[5.2100]			<rl< td=""><td></td></rl<>	
Vanadium	ND	10.00000 ι		<rl< td=""><td></td></rl<>	
Zinc	ND	20.00000 1	ug/L	<rl< td=""><td></td></rl<>	

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537025 Filename: tr255205

Run Name:

Run Type: CCB

Injected: 18-NOV-2004 09:38

Analyte	QuantAmt		Units	Req Flags
Aluminum	ND	100.0000	— · .	<rl< td=""></rl<>
Antimony	ND	60.00000		<rl< td=""></rl<>
Arsenic	ND	5.000000		<rl< td=""></rl<>
Barium	ND	10.00000	ug/L	<rl< td=""></rl<>
Beryllium	ND	2.000000		<rl< td=""></rl<>
Cadmium	ND	5.000000	ug/L	<rl< td=""></rl<>
Calcium	[54.370]	500.0000	ug/L	<rl< td=""></rl<>
Chromium	ND	10.00000		<rl< td=""></rl<>
Cobalt	ND	10.00000		<rl< td=""></rl<>
Copper	•	10.00000	.	<rl< td=""></rl<>
Iron	[11.290]	100.0000		<rl< td=""></rl<>
Lead	\mathtt{ND}	3.000000		<rl< td=""></rl<>
Magnesium	[28.520]			<rl< td=""></rl<>
Manganese	-	10.00000		<rl< td=""></rl<>
Molybdenum	[3.0500]	20.00000	₩	<rl< td=""></rl<>
Nickel	ND	20.00000		<rl< td=""></rl<>
Selenium	ND	5.000000		<rl< td=""></rl<>
Silver	ND	5.000000	— •	<rl< td=""></rl<>
Thallium	[4.7300]			<rl< td=""></rl<>
Titanium	[9.3300]			<rl< td=""></rl<>
Vanadium	ND	10.00000		<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537037 Filename: tr255217

Run Name:

Run Type: CCB

Injected: 18-NOV-2004 10:35

Analyte	QuantAmt		Units	Req Flags
Aluminum	ND	100.0000	— ' .	<rl< td=""></rl<>
Antimony	ND	60.00000	-	<rl< td=""></rl<>
Arsenic	ND	5.000000	→ •	<rl< td=""></rl<>
Barium	ND	10.00000	ug/L	<rl< td=""></rl<>
Beryllium	[0.5720]			<rl< td=""></rl<>
Cadmium	ND	5.000000		<rl< td=""></rl<>
Calcium	[34.400]	500.0000	ug/L	<rl< td=""></rl<>
Chromium	ND	10.00000	ug/L	<rl< td=""></rl<>
Cobalt	ND	10.00000	ug/L	<rl< td=""></rl<>
Copper	[3.1800]	10.00000	ug/L	<rl< td=""></rl<>
Iron	[12.330]	100.0000		<rl< td=""></rl<>
Lead	ND	3.000000		<rl< td=""></rl<>
Magnesium	ND	500.0000		<rl< td=""></rl<>
Manganese	ND	10.00000	ug/L	<rl< td=""></rl<>
Molybdenum	ND	20.00000		<rl< td=""></rl<>
Nickel	ND	20.00000	\mathtt{ug}/\mathtt{L}	<rl< td=""></rl<>
Selenium	ND	5.000000	ug/L	<rl< td=""></rl<>
Silver	ND	5.000000	ug/L	<rl< td=""></rl<>
Thallium	ND	5.000000	ug/L	<rl< td=""></rl<>
Titanium	10.80000			<rl ***<="" ib="" td=""></rl>
Vanadium	ND	10.00000		<rl< td=""></rl<>
Zinc	[5.1800]	20.00000	ug/L	<rl< td=""></rl<>

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537045 Filename: tr255226

Run Name:

Run Type: CCB

Injected: 18-NOV-2004 12:32

Analyte	QuantAmt		Units	Req Flags
Aluminum	-	100.0000		<rl< td=""></rl<>
Antimony	ND	60.00000	— · .	<rl< td=""></rl<>
Arsenic	[3.5700]		— • .	<rl< td=""></rl<>
Barium	ND	10.00000		<rl< td=""></rl<>
Beryllium	[1.1200]		—·.	<rl< td=""></rl<>
Cadmium	ND	5.000000		<rl< td=""></rl<>
Calcium	[16.320]		— · .	<rl< td=""></rl<>
Chromium	ND	10.00000		<rl< td=""></rl<>
Cobalt	ND	10.00000		<rl< td=""></rl<>
Copper	ND	10.00000		<rl< td=""></rl<>
Iron	[17.080]			<rl< td=""></rl<>
Lead	ND	3.000000		<rl< td=""></rl<>
Magnesium	ND	500.0000		<rl< td=""></rl<>
Manganese	ND	10.00000		<rl< td=""></rl<>
Molybdenum	[3.5700]			<rl< td=""></rl<>
Nickel	$\dot{ extbf{N}} ext{D}$	20.00000		<rl< td=""></rl<>
Selenium	ND	5.000000	- .	<rl< td=""></rl<>
Silver	ND	5.000000		<rl< td=""></rl<>
Thallium	[4.1200]			<rl< td=""></rl<>
Titanium	[7.8400]	10.00000		<rl< td=""></rl<>
Vanadium	ND	10.00000		<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537057 Filename: tr255238

Run Name:

Run Type: CCB

Injected: 18-NOV-2004 13:36

Analyte	QuantAmt	RL	Units	Req Fla	ags
Aluminum	ND	100.0000		<rl< td=""><td></td></rl<>	
Antimony	ND	60.00000		<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000		<rl< td=""><td></td></rl<>	
Barium	ND	10.00000		<rl< td=""><td></td></rl<>	
Beryllium	ND	2.000000		<rl< td=""><td></td></rl<>	
Cadmium	ND	5.000000		<rl< td=""><td></td></rl<>	
Calcium	ND	500.0000		<rl< td=""><td></td></rl<>	
Chromium	ND	10.00000		<rl< td=""><td></td></rl<>	
Cobalt	ND	10.00000		<rl< td=""><td>·</td></rl<>	·
Copper	ND	10.00000		<rl< td=""><td></td></rl<>	
Iron	ND	100.0000		<rl< td=""><td></td></rl<>	
Lead	ND	3.000000		<rl< td=""><td></td></rl<>	
Magnesium	[11.240]			<rl< td=""><td></td></rl<>	
Manganese	[1.3200]			<rl< td=""><td></td></rl<>	
Molybdenum	ND	20.00000		<rl< td=""><td></td></rl<>	
Nickel	ND	20.00000		<rl< td=""><td></td></rl<>	
Selenium	ND	5.000000		<rl< td=""><td></td></rl<>	
Silver	ND	5.000000		<rl< td=""><td></td></rl<>	
Thallium	ND	5.000000		<rl< td=""><td></td></rl<>	
Titanium	12.50000				***
Vanadium	ND	10.00000		<rl< td=""><td></td></rl<>	
Zinc	[5.7900]	20.00000	ug/L	<rl< td=""><td>·</td></rl<>	·

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537069

Run Name:

Filename: tr255250 Run Type: CCB

Injected: 18-NOV-2004 14:39

Analyte	QuantAmt		Units	Req Flags
Aluminum	ND	100.0000		<rl< td=""></rl<>
Antimony	ND	60.00000	- .	<rl< td=""></rl<>
Arsenic	[3.8900]	5.000000		<rl< td=""></rl<>
Barium	ND	10.00000	— ·	<rl< td=""></rl<>
Beryllium	ND	2.000000	• .	<rl< td=""></rl<>
Cadmium	ND	5.000000		<rl< td=""></rl<>
Calcium	ND	500.0000		<rl< td=""></rl<>
Chromium	ND	10.00000		<rl< td=""></rl<>
Cobalt	ND	10.00000		<rl< td=""></rl<>
Copper	ND	10.00000		<rl< td=""></rl<>
Iron	ND	100.0000		<rl< td=""></rl<>
Lead	ND	3.000000	□ ' .	<rl< td=""></rl<>
Magnesium	ND	500.0000		<rl< td=""></rl<>
Manganese	ND	10.00000	ug/L	<rl< td=""></rl<>
Molybdenum	ND	20.00000	— • .	<rl< td=""></rl<>
Nickel	ND	20.00000	-	<rl< td=""></rl<>
Selenium	ND	5.000000	-	<rl< td=""></rl<>
Silver	ND	5.000000		<rl< td=""></rl<>
Thallium	ND	5.000000		<rl< td=""></rl<>
Titanium	ND	10.00000		<rl< td=""></rl<>
Vanadium	ND	10.00000		<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537081

Run Name:

Filename: tr255262

Run Type: CCB

Injected: 18-NOV-2004 15:56

Analyte		QuantAmt	A STATE OF THE STA	Units	Req Flags
Aluminum		ND	100.0000	-	<rl< td=""></rl<>
Antimony		ND	60.00000		<rl< td=""></rl<>
Arsenic		ND	5.000000		<rl< td=""></rl<>
Barium	·.	ND	10.00000		<rl< td=""></rl<>
Beryllium	•	[0.6120]	2.000000	\mathtt{ug}/\mathtt{L}	<rl< td=""></rl<>
Cadmium	<i>:</i>	ND	5.000000		<rl< td=""></rl<>
Calcium	•	ND	500.0000		<rl< td=""></rl<>
Chromium		ND	10.00000		<rl< td=""></rl<>
Cobalt	•	ND	10.00000		<rl< td=""></rl<>
Copper	•	ND	10.00000		<rl< td=""></rl<>
Iron		ND	100.0000		<rl< td=""></rl<>
Lead		ND	3.000000		<rl< td=""></rl<>
Magnesium		[8.9380]			<rl< td=""></rl<>
Manganese		ND	10.00000	ug/L	<rl< td=""></rl<>
Molybdenum		[3.6300]			<rl< td=""></rl<>
Nickel		ND	20.00000		<rl< td=""></rl<>
Selenium		ND	5.000000	ug/L	<rl< td=""></rl<>
Silver		ND	5.000000		<rl< td=""></rl<>
Thallium	•	ND	5.000000		<rl< td=""></rl<>
Titanium		[0.4310]			<rl< td=""></rl<>
Vanadium		ND	10.00000		<rl< td=""></rl<>
Zinc		ND	20.00000	ug/L	<rl< td=""></rl<>

INTERFERENCE CHECK STANDARD A Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Seqnum: 74465537005 Filename: tr255184

Run Name:

Run Type: ICSA

Injected: 18-NOV-2004 07:44

Analyte	QuantAmt		Units		
Antimony	-	60.00000		<rl< td=""><td></td></rl<>	
Arsenic	5.350000			<rl< td=""><td></td></rl<>	
Barium		10.00000		<rl< td=""><td></td></rl<>	
Beryllium		2.000000		<rl< td=""><td></td></rl<>	
Cadmium		5.000000		<rl< td=""><td></td></rl<>	
Chromium		10.00000		<rl< td=""><td></td></rl<>	
Cobalt		10.00000		<rl< td=""><td></td></rl<>	
Copper		10.00000		<rl< td=""><td></td></rl<>	
Lead		3.000000		<rl< td=""><td></td></rl<>	
Manganese		10.00000		<rl< td=""><td></td></rl<>	
Molybdenum		20.00000		<rl< td=""><td></td></rl<>	
Nickel		20.00000		<rl< td=""><td></td></rl<>	
Selenium		5.000000		<rl< td=""><td></td></rl<>	
Silver		5.000000		<rl< td=""><td></td></rl<>	
Thallium	[2.2100]	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Titanium	31.20000	10.00000		<rl ***<="" a+="" td=""><td></td></rl>	
Vanadium	[-1.110]	10.00000		<rl< td=""><td></td></rl<>	
Zinc	[2.3300]	20.00000	ug/L	<rl< td=""><td></td></rl<>	

	SPIKED INT	ERFERENTS		
Analyte	SpikeAmt	QuantAmt	Units	%REC
Aluminum	500000	484100	ug/L	97
Calcium	500000	482800.	ug/L	97
Iron	200000	179600	ug/L	90
Magnesium	500000	517600	ug/L	104

INTERFERENCE CHECK STANDARD AB Curtis & Tompkins Laboratories

Instid Segnum : 74465537006

: MET07

Run Name :

Filename: tr255185

Injected : 18-NOV-2004 07:51
Caltype :

Standards: 04WS1841

Analyte		QuantAmt			Max %D Fl	ags
Aluminum		545600.0		9		
Antimony		557.0000		11	20	
Arsenic		551.0000		10		
Barium		504.0000		1 8 -3	20	
Beryllium		541.0000		8	20	
Cadmium		966.0000			20	
Calcium		542300.0		8		
Chromium		521.0000		4 5	2.0	
Cobalt		526.0000			20	
Copper		549.0000		10	20	
Iron		201100.0		1		
Lead		1060.000		6	20	
Magnesium		581300.0		16		
Manganese		522.0000		4	20	
Molybdenum		551.0000				
Nickel		973.0000		-3	20	
Selenium		539.0000		8	20	
Silver	1000.000	973.0000	ug/L	-3	20	
Thallium	500.0000	519.0000	ug/L	4	20	
Titanium	20000.00	22600.00	ug/L	13		
Vanadium	500.0000	530.0000	ug/L	6	20	
Zinc	1000.000	1030.000	ug/L	3	20	

INTERFERENCE CHECK STANDARD AB Curtis & Tompkins Laboratories

Instid : MET07

Segnum : 74465537082

Run Name :

Filename: tr255263

Injected : 18-NOV-2004 16:00
Caltype :

Standards: 04WS1841

Analyte		SpkAmt	QuantAmt	1010		Max %D Flags
Aluminum			533200.0		7	
Antimony			549.0000		10	20
Arsenic			554.0000		11	20
Barium			526.0000		5	20
Beryllium			493.0000		-1	20
Cadmium	•		1040.000		4	20
Calcium			460700.0		-8	
Chromium	•		499.0000		0	20
Cobalt			496.0000		-1	20
Copper			495.0000		-1	20
Iron			193500.0		-3	
Lead			1040.000		4	20
Magnesium			548500.0		10	
Manganese			473.0000		-5	20
Molybdenum			525.0000		5	20
Nickel			1000.000		0	20
Selenium			548.0000		10	20
Silver			898.0000		-10	20
Thallium			557.0000		11	20
Titanium			21600.00		8	
Vanadium			497.0000		-1	20
Zinc		1000.000	1060.000	ug/L	6	20

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Instrument: MET07 Sequence: 74465537 Instrum Analytical Method: EPA 6010B

TJA Trace ICP SOP Version: 6010B_rv7

Begun: 18-NOV-2004

# Filename Type	Samplenum	Batch	Matrix Analyzed IDF	PDF	IQC SPK uL	Stds Used	>LR
001 tr255180 CS			18-NOV-2004 06:57 1.0	1.0		7	
002 tr255181 ICV			18-NOV-2004 07:06 1.0	1.0		2	
003 tr255182 ICB			18-NOV-2004 07:13 1.0	1.0			
004 tr255183 CRI			18-NOV-2004 07:31 1.0	1.0		8	
005 tr255184 ICSA			18-NOV-2004 07:44 1.0	1.0	F	4:1	4:MG=517600
006 tr255185 ICSAB			18-NOV-2004 07:51 1.0	1.0		5 5:1	5:MG=581300
007 tr255186 BLANK	QC272675	96591	Filtra 18-NOV-2004 08:01 1.0	1.0	Н	_	
008 tr255187 BS	QC272676	96591	Filtra 18-NOV-2004 08:05 1.0	1.0	7		
009 tr255188 BSD	QC272677	96591	Filtra 18-NOV-2004 08:09 1.0	1.0	2		
010 tr255189 MSS	176067-004	96591	Filtra 18-NOV-2004 08:15 1.0	1.0	3	7:1	1:CA=162500
011 tr255190 MSS	176067-004	96591	Filtra 18-NOV-2004 08:24 1.0	1.0	7		1:CA=164400
012 tr255191 CCV			18-NOV-2004 08:30 1.0	1.0	Н	9	
013 tr255192 CCB			18-NOV-2004 08:37 1.0	1.0			
014 tr255193 MS	QC272678	96591	Filtra 18-NOV-2004 08:45 1.0	1.0	2 1	Н	:CA=159100
015 S r255194 MSD	QC272679	96591	Filtra 18-NOV-2004 08:49 1.0	1.0	2 1	-	1:CA=163500
016 tr255196 MS	QC272678	96591	Filtra 18-NOV-2004 08:59 1.0	1.0	2 1	1:	1:CA=161700
017 tr255197 MSD	QC272679	96591	Filtra 18-NOV-2004 09:03 1.0	1.0	2 1	1:	1:CA=158400
	176044-001	96591	Filtra 18-NOV-2004 09:08 1.0	1.0		1:	1:CA=156000
019 tr255199 SAMPLE	176071-001	96591	Filtra 18-NOV-2004 09:12 1.0	1.0	1	1:	1:MG=127700
tr25520	176071-001	96591	Filtra 18-NOV-2004 09:17 1.0	1.0		1:	1:MG=128900
	176071-003	96591	Filtra 18-NOV-2004 09:21 1.0	1.0		2:	2:MG=228000
-	176071-003	96591		1.0		2	2:MG=221000
-	176071-005	96591	Filtra 18-NOV-2004 09:29 1.0	1.0	- -1	1:	:MG=127800
024 tr255204 CCV			18-NOV-2004 09:34 1.0	1.0	Н	7	
025 tr255205 CCB			18-NOV-2004 09:38 1.0	1.0			
-	176071-005	96591	Filtra 18-NOV-2004 09:43 1.0	1.0		1:	1:MG=127200
	176071-007	96591	Filtra 18-NOV-2004 09:47 1.0	1.0		2:	2:MG=149200
028 tr255208 SAMPLE	176071-007	96591		1.0		2:	2:MG=146100
029 tr255209 SAMPLE	176093-001	96591	ra 18-NOV-2004 09:55 1.	٠		2:	2:MG=404100
030 tr255210 BS	QC272646	96585	WET Le 18-NOV-2004 10:00 1.0	1.0	2		
031 tr255211 BSD	QC272647	96585	WET Le 18-NOV-2004 10:04 1.0	1.0	2		

Stds used: 1=04WS1891 2=04WS2066 3=04WS1931 4=04WS1702 5=04WS1841 6=04WS2067 7=04WS2007 8=04SS171 9=04SS172

Analyst: A

Date:

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Instrument: MET07 Sequence: 74465537 Instrum Analytical Method: EPA 6010B

Begun: 18-NOV-2004

TJA Trace ICP SOP Version: 6010B_rv7

>LR	2:MG=420700																2:FE=261000			3:FE=Z//900	3:#18=318/00		5: FE=689800					3:FE=334Z00	4:CA=1576000	4:FE=538300	5:FE=516700
Stds Used					9								7						- [6 8	-			1	9						
IOC SPK uL		-	7	П		Н						Н			т.	н	7		7				7			Н	r-I				
PDF	1.0	5.0	5.0	5.0	٥٠٦	1.0	2.0	5.0	5.0	5.0	5.0	20.0	1.0	1.0	50.0	50.0	54.35	'n.	'n	54.35	46.73	52.08	6.5		1.0	1.0	54.35	49.50	31.65	o,	32.47
IDF	10:09 1.0	10:16 10.0	10:22 10.0	10:26 50.0	10:30 1.0	10:35 1.0	10:39 50.0	10:43 10.0	10:47 10.0	10:52 10.0	10:56 10.0	11:04 1.0	12:28 1.0	12:32 1.0	12:37 1.0	12:41 1.0	12:46 1.0		12:56 5.0	13:00 1.0	13:04 1.0	13:08 1.0	13:14 1.0	13:22 10.0	13:29 1.0	13:36 1.0	13:40 25.0	13:44 1.0	13:48 1.0	13:52 1.0	13:56 1.0
Matrix Analyzed	18-NOV-2004	18-NOV-	18-NOV-2004	18-NOV-	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004	18-NOV-2004																
Matrix	Filtra	WET Le	WET Le	WET Le			WET Le Soil			Soil	Soil	Soil	Soil			Soil	Soil	Soil	Soil	Soil											
Batch	96591	ന	96585	96585			96585	96585	96585	96585	96585	96610			96610	96610	96610	96610	96610	96610	96610	96610	96610	96610			96610	96610	96610	96610	96610
Samplenum	176093-001	QC272645	175970-001	QC272650	ı		00272650	OC272648	OC272649	175973-001	175977-007	QC272742	!		OC272743	QC272744	176109-002	QC272747	176109-002	QC272766	OC272745	OC272746	176111-005	176111-005			QC272747	176109-003	176103-001	176103-002	176103-003
# Filename Time	1	3 tr255213	tr255214	tr255215	tr255216	tr255217	tr255218	tr255219	tr255220	tr255221	tr25522	tr255223	tr25522	tr255226	Pr255227	tr255228	tr255229	tr255230	tr255231	tr255232	tr255233	tr255234	tr255235	55 tr255236	+r255237	Tr255338	tr255239	+r255240	0 tr2555241	tr255242	tr255243

Stds used: 1=04WSj891 2=04WS2066 3=04WS1931 4=04WS1702 5=04WS1841 6=04WS2067 7=04WS2007 8=04SS171 9=04SS172

Date: # Analyst: 6 Page 2 of 3

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Instrument: MET07 Sequence: 74465537 Instrum Analytical Method: EPA 6010B

TJA Trace ICP SOP Version: 6010B_rv7

Begun: 18-NOV-2004

>LR	4:FE=578100	5:CA=971200	4・日日一コンピンハハ	002020-11-1	3:FE=358000	4:FE=353200															5:MG=548500
Stds Used				-			7												9		5
IOC SPK uL									7	H	П	7				н					
PDF	53.76	41.67	1 V	44.40	49.02	34.48	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	٦.0	1.0	1.0	1.0	1.0	1.0	1.0
lvzed	18-NOV-2004 14:00 1.0	2004	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18-NOV-Z004 14:08 1.0	18-NOV-2004 14:12 1.0	18-NOV-2004 14:16 1.0	18-NOV-2004 14:29 1.0	18-NOV-2004 14:39 1.0	18-NOV-2004 14:59 1.0	18-NOV-2004 15:08 1.0	18-NOV-2004 15:12 1.0	18-NOV-2004 15:16 1.0	18-NOV-2004 15:22 1.0	18-NOV-2004 15:27 1.0	18-NOV-2004 15:31 1.0	18-NOV-2004 15:38 1.0	18-NOV-2004 15:41 1.0	18-NOV-2004 15:46 1.0	18-NOV-2004 15:51 1.0	18-NOV-2004 15:56 1.0	18-NOV-2004 16:00 1.0
Matrix Analyze	Soil			SOIL 18-	Soil 18-	Soil 18-	18.	18-	Water 18	18	18	18									
Batch	96610	96610	0 1	01996	96610	96610		,	96611	96611	11996	96611	96611	96611	96611	96611	96611	96611			
Samplenim	176085-001	176096-001	T00-06001T	176097-005	176105-001	176107-001		•	QC272748	QC272748	QC272749	QC272750	176105-005	QC272751	QC272752	176105-005	176109-001	176109-004			
4 CT. F. OBSCHOOL	063 + 7055044 SAMDLE	ないないのでは、	C1722242	065 tr255246 SAMPLE	066 tr255247 SAMPLE	tr255248	tr255249	069 tr255250 CCB			072 tr255253 BS				076 Er255257 MSD			tr255260	tr255261	++255262	ないのはいない

Stds used: 1=04WS1891 2=04WS2066 3=04WS1931 4=04WS1702 5=04WS1841 6=04WS2067 7=04WS2007 8=04SS171 9=04SS172

Analyst: 5

Date:



REPORTING SUMMARY FOR 176111 METALS Soil Curtis & Tompkins Laboratories

					S	Α	В	В	С	C	С	C	F	P	M	H	М	N	S	Α	Т	v	Z	
Lab ID	Inst ID	Analyzed		IDF	В	S	Α	E	D	R	0	ט	E	В	И	G	0	ΙÌ	E	G	L		N	
176111-005	MET07	11/18/04	13:14	1.0	+	+	+	+	+	+	+	+		+			+	+	+	+	+	+	+	
176111-005	MET07	11/18/04	13:22	10.0]							+		+]									•
176111-005	MET04	11/18/04	16:08	1.0]]	+								
QC272742	MET07	11/18/04	11:04	1.0	 + !	 + 	 + 	 + 	 + 	+	+	+	+	+	+		+	+	+	+	+	 + 	 + 	ı
QC272743	MET07	11/18/04	12:37	1.0	 + 	 + 	 + 	 + 	+	 +	+	+	+	+	+		+	+	+	+	+	 + 	 + 	ı
QC272744	MET07	11/18/04	12:41	1.0	+	+	+	 + 	+	 +	+	+	+	+	+		+	+	+	+	+	+	+	1
QC272745	MET07	11/18/04	13:04	1.0	+	+	+	 + 	+	 + 	+	+	+	+	+	j	+	+	+	+	+	 + 	+	
QC272746	MET07	11/18/04	13:08	1.0	+	+	+	 + 	+	 + 	+	+	+	+	+	j	+	+	+	+	+	 	+	
QC272747	MET07	11/18/04	12:51	5.0	+	+	+	+	+	+	+	+	i	+	+ İ	i	+	+	+	+	+	+	+	
QC272747	MET07	11/18/04								į			+	İ	į	į	į	į	į					
QC272766	MET07	11/18/04	13:00	1.0	 	+	 + 	 +	+	 + 	+	+	 	+	+]	+	+	+	+	+	 + 	+	
QC272805	MET04	11/18/04	16:02	1.0	! !			 								+	! [t : 	
QC272806	MET04	11/18/04	16:04	1.0				 					ļ			+								
QC272807	MET04	11/18/04	16:06	1.0				 					İ			+		į						
QC272808	MET04	11/18/04	16:13	1.0	 			 					j		ļ	+		į						
QC272809	MET04	11/18/04	16:15	1.0												+								

18-NOV-2004 10:04	Spike #1 ID : 0488171 Spike #2 ID : 0488172 Spike #3 ID :
Sample Preparation Summary	Analysis : N/A Bgroup : ICAP Units : g Clean-up :
Curtis & Tompkins Laboratories	Batch Number : 96610 Date Extracted: 18-NOV-2004 Extracted by : Victor Vergara Prep Method : 3050B

ents																					
Comments												mss									
Clean pH Sp 1 Sp 2 Sp 3 Analyses Clean D.F Vol Vol Vol Wethod	T26/ICP	Δ	Λ	>	T26/ICP	CD, CR, NI, PB, ZN	BG	PB	PB	AS, PB, SB	AS, PB, SB	Ed	PB	TAL/ICP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP
Sp 2 Sp Vol Vol																ហ	'n	ĸij.	r.		
Sp 1 Sp Vol Vo							٠									τί	ιċ	ω̈́	κi		
s Hđ us																					
	5344]	45.871560 1	31.055901 1	37.878788 1	41.666667 1	44.247788 1	31.645570 1	34.965035 1	32.467532 1	49.019608 1	34.482759 1	54.347826 1	49.504950 1	36.496350 1	50.000000 1	50.000000 1	50.000000 1	46.728972 1	52.083333 1	54.347826 1	54.347826 1
Init Units Final Prep W/V Vol D.F	4	50	20	20	20	20	50	20	20	20	50	20	20	20	20	50	20	50	20	20	20
Units	9	ים	מ	D)	מ	מ	מ	מ	מ	מ	מ	מ	מ	מ	מ	ы	מ	p	ģ	מ	ת
Init W/V	.93	1.09	1.61	1.32	1.2	1.13	1.58	1.43	1.54	1.02	1.45	. 92	1.01	1.37	-4	7	7	1.07	96.	. 92	.92
Matrix	Soil	Miscell.	Miscell.	Miscell.	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Client	URS Corporation	ConocoPhillips Company	ConocoPhillips Company	ConocoPhillips Company	LFR Levine Fricke	Safeway Milk Plant	CH2M Hill Constructors Inc.	CH2M Hill Constructors Inc.	CH2M Hill Constructors Inc.	Baseline Environmental	Baseline Environmental	Presidio Trust	Presidio Trust	Treadwell & Rollo				Ç	Q	2	2
																		of 176109-002	of 176109-002	of 176109-002	of 176109-002
Type															BLANK	BS	BSD	S	MSD	SER	PDS
Sample	176085-001	176091-001	176091-002	176091-003	176096-001	176097-005	176103-001	176103-002	176103-003	176105-001	176107-001	176109-002	176109-003	176111-005	OC272742	OC272743	OC272744	OC272745	0C272786	00272747	QC272766

Reviewed By:

Date:

Date: 🗘

Relinquished By:

Prep Chemist:_

Received By:

LIMS Batch #: 966	10	Digestion Method	BK 2025
Date Digested:	1/24	☐ EPA 3050b	Page 33
Digested by: V	7		

2211121-4	Weight of	Final	Filter	red?
以间的中 Sample # and letter	Sample (g)	Volume (mL)	(y/n)	Comments
BIX-QC 96610 272742	\varnothing	50.0	Y	
* 85 277443 2122413		,		
850 772744	<i>\</i>			
(V)	i.07			
X 17-002 WS 1	0.96			
176085-001	0.93			comp 4 cores
176091-001	1-09			comp 3 yars.
- 657_	1-61			<u> </u>
\$ 003	1.32			
10 176096-001	1.20		<u> </u>	
176097-000 canceld A	<u> 1-08</u>			
176097 oog canceld A	1-06			
1/2 . 005	1.13			
176103-001	1.58		$\bot \!\!\!\! \bot$	
15 \ 001	1.43		<u> </u>	
1 - 083	1.54			
176105-001 A	107			
176107001 A	145		1.	
176109-002 A	0.92			WS
20 1 - 5-3	1-01		$\bot \downarrow$	
176111-005	1.37	 	1 1	camp 001,002,003,004,
		<u> </u>	-	
			<u> </u>	

	Reagent 1D of LIMS #	Illitials / Date
digestion temperature (90 - 95 degrees C)	75°C	MILLA
mL of spike solution was added to all spikes	045517/*	,
·	04551708	
1:1 HNO3	A27048-101504	
concentrated HNO3	1/A26057- 1/Bakel	
3mL 30% hydrogen peroxide	441384252 V.W.K	
concentrated HCl	A33046- 11 Baker	
₹ filtered thru' Whatman # 541	E1566057-J	

Continued from page Continued on page _

Reviewed by / Date

Curtis & Tompkins Laboratories MDL Summary for EPA 6010B Soil 3050B

		MET01	METO7	METOS A	METOS R
Analyte		07/26/04 1.5	07/21/04 0.52		09/10/04 1.3
Aluminum		07/20/04 1.3	07/21/04 0.20	09/10/04 0.076	
Antimony	5,5	07/26/04 2.8	07/20/04 0.10	09/10/04 0.10	
Arsenic		07/27/04 0.098	07/21/04 0.013		09/10/04 0.033
Barium	Z	07/20/04 0.029	07/21/04 0.0063	09/10/04 0.0056	
Beryllium	5,5	07/20/04 0.14	07/21/04 0.028	09/10/04 0.0076	
Cadmium	mg/Kg		07/21/04 0.58		09/10/04 1.5
Calcium	mg/Kg	07/26/04 2.8 07/20/04 0.29	07/21/04 0.033	09/10/04 0.013	
Chromium	mg/Kg	07/20/04 0.23	07/21/04 0.076	09/10/04 0.0087	
Cobalt	mg/Kg	07/20/04 0.33	07/21/04 0.057	09/10/04 0.069	
Copper	mg/Kg	07/20/04 0.11	07/21/04 0.80		09/10/04 0.33
Iron	mg/Kg	07/26/04 7.9	07/20/04 0.065	09/10/04 0.078	
Lead	mg/Kg	07/20/04 1.5	07/21/04 0.52		09/10/04 1.2
Magnesium	mg/Kg	07/20/04 1.3	07/20/04 0.11		09/10/04 0.023
Manganese	mg/Kg	07/20/04 0.43	07/21/04 0.062	09/10/04 0.032	
Molybdenum	mg/Kg	07/20/04 0.64	07/21/04 0.067	09/10/04 0.017	
Nickel	mg/Kg	07/27/04 18	,		09/17/04 3.7
Potassium	mg/Kg	07/27/04 8.1	07/21/04 0.17	09/10/04 0.18	
Selenium	mg/Kg	07/26/04 0.18	07/21/04 0.098	09/10/04 0.032	
Silver	mg/Kg	07/26/04 2.8	. , ,		09/17/04 3.2
Sodium	mg/Kg	07/26/04 9.5	07/21/04 0.21	09/10/04 0.17	
Thallium	mg/Kg	07/20/04 0.14	07/21/04 0.045	09/10/04 0.039	
Vanadium	mg/Kg mg/Kg	07/20/04 0.17	07/21/04 0.17		09/10/04 0.091
Zinc	mg/Kg	07/27/04 3.1		09/17/04 0.32	
Boron	mg/Kg mg/Kg	07/26/04 1.0		09/17/04 0.085	
Tin	-	07/26/04 0.099			09/17/04 0.068
Titanium	mg/Kg	0,720,01 0.023			



MOISTURE DATA

Percent Moisture Summary Report

Batch: 96606 Date: 11/18/04 Method: CLP SOW 390

Analyst: RSM

				Percent	Percent	
Sample	Tare (g)	Wet (g)	Dry (g)	Solids	Moisture	
175913-001	11.1140	18.9296	18.7661	98	2	
175913-002	11.0691	18.6244	16.6594	74	26	
175913-003	11.1597	19.7052	17.9457	79	21	
175913-004	11.0418	18.3546	17.3734	87	13	
175913-005	11.1482	18.9488	16.9865	7 5	25	
175913-006	11.2075	19.3467	17.5767	78	22	
175913-008	15.5947	22.3194	21.0779	82	18	
175913-009	11.1481	18.9501	17.3826	80	20	
176103-001	10.9941	18.5082	17.0773	81	19	
176103-002	15.3139	22.3124	20.8707	79	21	
176103-003	15.4126	22.7311	21.4771	83	17	
176109-002	11.1233	18.9643	18.4208	93	7	
176109-003	11.0929	18.7151	18.2125	93	7	
176111-005	11.1093	19.2007	18.5239	92	8	
QC272729	11.6763	18.6105	17.3351	82	18	
of 176103-001			RPD:	0.8%	3.5%	

Curtis & Tompkins Laboratories Sample Batch Report

Analysis : MOISTURE

Batch Number: 96606 Date Started: 17-NOV-2004 Bgroup : N/A Department : Metals Batched by : Rodellio S. Manuel

Sample Type		Client	Matrix	Analyses	Due Date
175913-001		MWH	Soil	MOISTURE	19-NOV-2004
175913-002		MWH	Soil	MOISTURE	19-NOV-2004
175913-003		MWH	Soil	MOISTURE	19-NOV-2004
175913-004		MWH	Soil	MOISTURE	19-NOV-2004
175913-005		MWH	Soil	MOISTURE	19-NOV-2004
175913-006		HWM	Soil	MOISTURE	19-NOV-2004
175913-008		HWM	Soil	MOISTURE	19-NOV-2004
175913-009		MWH	Soil	MOISTURE	19-NOV-2004
176103-001		CH2M Hill Construc	Soil	MOISTURE	18-NOV-2004
176103-002		CH2M Hill Construc	Soil	MOISTURE	18-NOV-2004
176103-003		CH2M Hill Construc	Soil	MOISTURE	18-NOV-2004
176109-002		Presidio Trust	Soil	MOISTURE	18-NOV-2004
176109-003		Presidio Trust	Soil	MOISTURE	18-NOV-2004
176111-005		Treadwell & Rollo	Soil	MOISTURE	18-NOV-2004
QC272729 SDUP	of 176103-001		Soil	MOISTURE	

Notebook No. 2033 15 MOISTURE PROJECT____ Continued From Page 11/17/04 96606 INITINA-Fin. wt. Comments Tone ut. BL DIGHT Sample 15.9941 4D 15.9940 18.7661 18-9296 B/03 11. 11 40 1759,13-11.0691 18.6244 16 6594 10101 16 70 52 en 17.9457 11.1597 る 17.3734 10/04 18 3546 11/18 18 3734 11-04/8 169865 11.1482 18.9488 au 17.5767 11.2075 19.3467 22.3/94 15-5947 21,0779 УŻ 18.9501 17.3826 AAA 11.1481 18.5082 10-9941 17.0773 176103-17.3351 18-6105 11.6763 ÁI DUD 22.3124 153139 20,8717 1172 214771 15 4126 22-7311 MOTTIZ 3 18 9643 18-4204 176109 10116 11.1233 18.7151 18.2125 11.0929 めゆろ 18.5239 COMP. 1-4 19.2007 FFF 11.1093 176111 ONEW TEMP 105°2 ME IN \$:50 PM. ON: 11-18-024 ME OUT 9:34 N.M. Continued on Page Read and Understood By mu

Z. Moned

11-17-04-110

Signed

Date

geologica

DRAFT FINAL LETTER REPORT SAMPLING AND TESTING IMPORTED DUNE SAND

Presidio of San Francisco San Francisco, California

Submitted to:

The Presidio Trust

August 31, 2004

Prepared by:

Geologica Inc.



August 30, 2004

The Presidio Trust 1750 Lincoln Boulevard San Francisco, CA 94129

Attention: Mr. George A. Ford

Manager, Remedial Constructions

DRAFT Final Letter Report GA-9 Stockpile Sampling and Testing Imported Dune Sand Presidio of San Francisco San Francisco, California

Dear Mr. Ford:

1.0 INTRODUCTION AND PURPOSE

GEOLOGICA is pleased to submit this Letter Report summarizing the results of dune sand stockpile sampling and analytical testing services performed at the Presidio of San Francisco ("the Presidio") in San Francisco, California. Through mid-August 2004, approximately 21,000 cu yds of dune sand had been imported to the Presidio from construction excavations in Golden Gate Park in San Francisco. The stockpile is expected to eventually reach approximately 40,000 cu yds. The dune sand has been stockpiled at Graded Area 9 (GA-9) in the Presidio and is to be used for re-establishment of dune sand habitat at selected locations in the Presidio.

Based on information available, the dune sand is believed to be virgin material, un-impacted by any historical human activities. However, for purposes of documentation, and as a conservative measure, the Presidio Trust ("the Trust") requested that a limited sampling and testing program be conducted to "spot check" the stockpile to confirm its expected condition. The following sections summarize the general approach, the work performed, and the results of the analytical testing.

2.0 GENERAL TECHNICAL APPROACH

At the time of the sampling on July 30, 2004, approximately 15,000 cu yds of dune sand had been stockpiled at GA-9 in a roughly east-west trending pile approximately 240 feet long by 30 feet high by 50 feet wide (see **Figure 1**). As shown on **Figure 1**, the stockpile had two broad faces, one north-facing and one south-facing. The general approach was to collect four (4) uniformly-spaced, discrete samples along each of the two faces of the stockpile to allow for preparation of

two 4-point composite samples to be tested for a broad suite of parameters. Results were compared to relevant clean-up levels established for the Presidio (EKI, 2002). GEOLOGICA performed all sampling in accordance with the Presidio Trust Quality Assurance Project Plan (QAPP)/Sampling and Analysis Plan (SAP) dated February 2001. Details of the scope of work and methodologies employed are discussed in **Section 3**.

3.0 SCOPE OF WORK AND METHODOLOGIES

Tasks undertaken are described in the following subsections:

3.1 Task 1 – Preliminary Activities

Task 1 included procurement and coordination with project subcontractors, including the analytical laboratory, Curtis & Tompkins, of Berkeley, CA, and the data validation subcontractor, DataVal, of San Rafael, CA, prior to fieldwork. Site access was facilitated by the Presidio Trust representative, Mr. George Ford. No special permits were required given the nature of the sampling.

3.2 Task 2 – Stockpile Visual Observations and Sampling

Task 2 included visual inspection of the stockpile. An effort was made to identify the presence of stockpile heterogeneities and/or potential contamination.

Sampling was conducted in accordance with *Presidio Trust – Environmental SOP No. 012, Bulk Material Sampling.* The eight (8) discrete samples (south face: GA9SS501 through GA9SS504; north face: GA9SS505 through GA9SS508) were collected at uniformly spaced locations on the two faces of the stockpile. In addition, on the south face, discrete sample duplicates (DUP073004-501 through DUP073004-504) were collected at each of the four locations to allow preparation of a duplicate composite sample. Sampling procedures were as follows: at each sampling location, GEOLOGICA field technician, Brian Aubry, R.G., C.E.G., cleared the upper 6 inches (0.5 feet) of surface dune sand with a dedicated, clean metal scoop. The scoop was then used to collect a discrete sample, which was placed in a laboratory-provided 8 oz glass sample jar with a plastic screw top. After collecting the sample, the jar was labeled for identification, and preserved in a cooler packed with ice to maintain a temperature of 4°C (+/- 2°C). All sampling equipment was cleaned prior to use; no decontamination was required between sample locations since dedicated scoops, cleaned prior to fieldwork and sealed in separate zip-lock bags, were used at each location.

3.3 Task 3 - Analytical Testing and Data Validation Program

Samples were hand delivered by GEOLOGICA immediately after sampling to Curtis & Tompkins of Berkeley, California for laboratory testing on a 48-hour rush turnaround basis with results to be provided in a Level III reporting format. Samples were composited by the laboratory as described on the chain-of-custody record. The laboratory was instructed to retain a portion of each discrete sample for potential future analysis, if warranted. The two composite samples and one duplicate were analyzed for the following suite of parameters:

- TPH gasoline/BTEX C7-C12 by EPA Method 8015M/8020
- TPH diesel C12-24 and TPH motor oil C-24-36 by EPA Method 8015M
- Pesticides and PCBs by EPA Method 8081 and 8082
- Total Lead by ICP by EPA Method 6020

All testing was done in accordance with the Presidio Trust QAPP. TPH-diesel and motor oil testing included the silica gel cleanup procedure and all results were referenced to dry weight. Laboratory analytical results, in Level III reporting format, were delivered electronically on August 3, 2004 to DataVal of San Rafael, California for review.

4.0 RESULTS

The following sections detail the results of the field sampling, analytical testing, and data validation programs.

4.1 Stockpile Visual Observations

The stockpiled dune sand constituted a remarkably homogeneous, slightly moist, well-sorted, medium-grained dune sand, typical of windblown or wave-transported sand deposits. Virtually no organic debris or other matter was noted within the stockpiled material. No evidence of contamination of any kind was observed by the GEOLOGICA field technician. A photograph of the stockpile is included in **Figure 1**.

4.2 Composite Sample Laboratory Chemical Testing

Laboratory analytical results and reporting levels are shown in **Table 1.** No TPH as gasoline/BTEX, TPH as diesel/motor oil, organochlorine pesticides, or PCBs were detected in any of the composite samples collected for this study. Total lead levels varied from 1.6 to 1.8 mg/kg in the two composite samples and the duplicate composite. The Curtis & Tompkins laboratory analytical report is included in **Appendix A**.

4.3 Data Quality Control Evaluation

The Curtis & Tompkins Level III laboratory analytical report was reviewed by DataVal Inc. of San Rafael, CA. DataVal concluded that all of the data were "usable as reported." The DataVal report is included as **Appendix B**.

The TPH-diesel and TPH-motor oil quantitation limits for the non-detect results in samples GA9SSCOMP501-504 and DUP073004COMP501-504 were each qualified as "an estimated value" due to surrogate recoveries outside the project acceptance criteria. This is likely due to matrix interferences. The data qualifications are noted in **Table 1**.

DataVal also noted that in some cases, reporting limits were raised above the project reporting limits due to the dry weight correction. In addition, the reporting limit for toxaphene was raised from 40 ug/kg to 61-62 ug/kg.

5.0 DISCUSSION

Table 1 includes available soil clean-up levels established for the Presidio in EKI (2002), *Cleanup Levels Document*. Analytical results are compared to the dune sand soil clean-up levels for human residential land use / protection of ecological receptors. None of the constituents tested, with the exception of total lead, were detected above their reporting levels. Even though the reporting levels have in some cases been slightly raised or qualified (as described in **Section 4.3**), all reporting levels are well below available soil cleanup criteria. (It should be noted that no Presidio clean-up criteria have been established for toxaphene and gamma-BHC.) Total lead levels detected (1.6 to 1.8 mg/kg) are well below the total lead cleanup level of 160 mg/kg. The total lead levels are almost certainly indicative of naturally-occurring background lead concentrations in the material.

6.0 CONCLUSIONS

Based on this limited composite sample testing program, no evidence was found to disconfirm available information regarding the unimpaired nature of the dune sand or indicate contamination that would render it inappropriate for its intended use. Assuming that the dune sand imported to the Presidio after July 30, 2004, i.e., the remainder of the 40,000 cu yds, is of similar origin and character, no further sampling or testing is recommended for this material.

Should you have any questions about this Letter Report, please do not hesitate to contact me at (415) 597-7883.

Sincerely,

GEOLOGICA INC.

Brian F. Aubry, R.G., C.E.G, C.Hg.

Principal

Attachments:

Table 1 – Summary of Chemical Test Results

Figure 1 – Discrete Sample Locations, GA-9 Dune Sand Stockpile, July 30, 2004

Appendix A – Analytical Laboratory Report, Curtis & Tompkins, August 10, 2004

Appendix B – Quality Control Summary Report, DataVal Inc., August 11, 2004

TABLES

TABLE 1

Summary of Chemical Test Results⁽¹⁾ Dune Sand Stockpile Composite Samples Area GA-9 Presidio of San Francisco July 30, 2004

Petroleum Hydrocarbons	Method	Analyte	Units	Reporting Limit	GA9SS- COMP501-504	DUP073004- COMP501-504 ⁽²⁾ 7/30/2004	GA9SS- COMP505-508	Soil Cleanup Levels ⁽³⁾ Residential - Beach / Dune
Petroleum Hydrocarbons Petroleum Hydrocarb					7/30/2004		7/30/2004	
EPA 015B Diesel Range Organics (C1-C24) ⁽⁶⁾ mg/kg 1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	Discrete Sa	mple Depth (ft bgs)			6"	6"	6"	Ecological - Special Status
EPA B015 Diesel Range Organics (C1-C24) mg/kg 1.0		Datralaum Hudraaarhana						
FAR BOTES Notice Of Range Organics (C24-C36) my/kg 5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1 <5.1	DA 901ED		ma/ka	1.0	-1 O ⁽⁵⁾	<1 O ⁽⁵⁾	-1.0	700 (115)(6)
EPA 8015B Gasoline Range Organics (C7-C12) mg/kg 0.97 + 1.0 < +1.0 < +9.97 < +1.0 610 (100) EPA 8021B Berbarene ug/kg 4.9 - 5.1 < +5.1 < 4.9 < +5.0 < 600 EPA 8021B Toluene ug/kg 4.9 - 5.1 < +5.1 < 4.9 < +5.0 < 5.0 < 270,000 EPA 8021B Ethyberzene ug/kg 4.9 - 5.1 < +5.1 < 4.9 < +5.0 < 5.0 < 600,000 EPA 8021B m.p. Zylenes ug/kg 4.9 - 5.1 < +5.1 < 4.9 < +5.0 < 5.0 < 55,000 EPA 8021B m.p. Zylenes ug/kg 4.9 - 5.1 < +5.1 < 4.9 < +5.0 < 5.0 < 55,000 EPA 8021B m.p. Zylenes ug/kg 4.9 - 5.1 < +5.1 < 4.9 < +5.0 < 5.0 < 55,000 EPA 8021B alpha EHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A alpha EHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A alpha EHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 6.2 EPA 8081A deta-BHC ug/kg 3.3 - 3.4 < 3.3 < 3.4 < 3.4 < 3.4 < 3.4 EPA 8081A ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 < 1.7 < 1.8 EPA 8081A ug/kg 1.7 & 1.8 < 1.7 < 1.7 < 1.8 < 1.7 < 1.8 EPA 8081A ug/kg 1.7								
EPA 8021B Benzene								
EPA 8021B Toluene								
EPA 8021B Ehyybenzene ug/kg 4.9 - 5.1 <.5.1 <.4.9 <.5.0 60,000 EPA 8021B m, p-Xylenes ug/kg 4.9 - 5.1 <.5.1 <.4.9 <.5.0 55,000 EPA 8021B o-Xylene ug/kg 4.9 - 5.1 <.5.1 <.4.9 <.5.0 55,000 EPA 8021B o-Xylene ug/kg 4.9 - 5.1 <.5.1 <.4.9 <.5.0 55,000 EPA 8021B o-Xylene ug/kg 4.9 - 5.1 <.5.1 <.4.9 <.5.0 55,000 EPA 8021A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A alpha-BHC ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 62 EPA 8031A Aldrin ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 1.7 <1.8 1.7 EPA 8031A Aldrin ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 1.7 <1.8 1.7 EPA 8031A Aldrin ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7 <1.7 <1.8 1.7 <1.8 <1.7 <1.7 <1.8 1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.7 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7 <1.7 <1.8 <1.8 <1.7								
EPA 8021B m, p-Xylenes ug/kg 4.9 - 5.1 < 5.1 < 4.9 < 5.0 55,000 ⁽⁷⁾								
CPA 8021B Oxylene ug/kg 4.9 - 5.1 < 5.1 < 4.9 < 5.0 55,000(°) Organochlorine Pesticides EPA 8081A alpha BHC ug/kg 1.7 - 1.8 < 1.7								
Organochlorine Pesticides EPA 8081A alpha-BHC ug/kg 1.7 - 1.8 < 1.7 < 1.7 < 1.8 62								
EPA 8081A alpha-BHC ug/kg	EPA 8021B	0-Aylene	ug/kg	4.9 - 5.1	<0.1	<4.9	<5.0	55,000
PA 8081A Deta-BHC Ug/kg 1.7 - 1.8 4.17 4.18 6.2		Organochlorine Pesticides						
PA 8081A Deta-BHC Ug/kg 1.7 - 1.8 4.17 4.18 6.2	PA 8081A	alpha-BHC	ua/ka	1.7 - 1.8	<1.7	<1.7	<1.8	62
PA 8081A gamma-BHC ug/kg 1.7 - 1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8								
PA 8081A delta-BHC ug/kg 1.7 - 1.8 <1.7 <1.8 62	PA 8081A	gamma-BHC		1.7 - 1.8	<1.7	<1.7	<1.8	-
PA 8081A Heptachlor Ug/kg 1.7 - 1.8 <1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7				1.7 - 1.8	<1.7	<1.7	<1.8	62
PA 8081A Heptachlor epoxide ug/kg 1.7 - 1.8 <1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7 <1.8 1.7 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 1.1 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.8 <1.7 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8 <1.8	PA 8081A	Heptachlor		1.7 - 1.8	<1.7	<1.7	<1.8	17
PRA 8081A Endosulfan	EPA 8081A	Aldrin	ug/kg	1.7 - 1.8	<1.7	<1.7	<1.8	3.9
EPA 8081A A4-DDE Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 30 EPA 8081A A4-DDE Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <3.4 98 EPA 8081A Endrin Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 4 EPA 8081A Endosil Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A Endrin aldehyde Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A 4-PDT Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A 4-PDT Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A EPA 80	EPA 8081A	Heptachlor epoxide	ug/kg	1.7 - 1.8	<1.7	<1.7	<1.8	
EPA 8081A A4-DDE Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 30 EPA 8081A A4-DDE Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <3.4 98 EPA 8081A Endrin Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 4 EPA 8081A Endosil Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 EPA 8081A Endosil Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A Endrin aldehyde Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A 4-PDT Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A 4-PDT Ug/kg 3.3 · 3.4 <3.3 <3.4 <3.4 <4.4 EPA 8081A EPA 80	EPA 8081A	Endosulfan I	ug/kg	1.7 - 1.8	<1.7	<1.7	<1.8	1,100 ⁽⁸⁾
EPA 8081A Endrin	EPA 8081A	Dieldrin	ug/kg	3.3 - 3.4	<3.3	<3.4	<3.4	
EPA 8081A Endosulfan II	EPA 8081A	4,4' -DDE	ug/kg	3.3 - 3.4	<3.3	<3.4	<3.4	98
EPA 8081A Endosulfan Sulfate	EPA 8081A	Endrin	ug/kg	3.3 - 3.4	<3.3	<3.4	<3.4	4
EPA 8081A 4,4*-DDD ug/kg 3.3 - 3.4 <3.3 <3.4 <3.4 <4.4 49 EPA 8081A Endrin aldehyde ug/kg 3.3 - 3.4 <3.3 <3.3 <3.4 <3.4 <4.4 EPA 8081A Endrin aldehyde ug/kg 3.3 - 3.4 <3.3 <3.3 <3.4 <3.4 <4.4 EPA 8081A 4,4*-DDT ug/kg 3.3 - 3.4 <3.3 <3.4 <3.4 <3.4 &4.2 EPA 8081A alpha-Chlordane ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 gs ⁽⁶⁾ EPA 8081A gamma-Chlordane ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 gs ⁽⁶⁾ EPA 8081A Methoxychlor ug/kg 17 - 18 <1.7 <1.7 <1.8 440 EPA 8081A Toxaphene ug/kg 61 - 62 <61 <61 <62 - EPA 8082 Arcolor-1221 ug/kg 12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12	EPA 8081A	Endosulfan II	ug/kg	3.3 - 3.4	<3.3	<3.4	<3.4	1,100 ⁽⁸⁾
EPA 8081	EPA 8081A	Endosulfan Sulfate	ug/kg	3.3 - 3.4	<3.3	<3.4	<3.4	1,100
PA 8081A A,4 '-DDT	EPA 8081A	4, 4'-DDD	ug/kg	3.3 - 3.4	<3.3	<3.4	<3.4	49
EPA 8081A alpha-Chlordane								
PA 8081A gamma-Chlordane ug/kg 1.7 - 1.8 <1.7 <1.7 <1.8 9 9			ug/kg					
PA 8081A Methoxychlor Ug/kg 17 - 18 <17 <17 <18 440 PA 8081A Toxaphene Ug/kg 61 - 62 <61 <61 <62 <-1 PA 8081A Toxaphene Ug/kg 61 - 62 <61 <61 <62 <-1 PA 8082 Arcolor-1016 Ug/kg 12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <1	EPA 8081A	alpha-Chlordane	ug/kg	1.7 - 1.8	<1.7	<1.7	<1.8	
PA 8081A Toxaphene Ug/kg 61 - 62 <61 <61 <62 -	PA 8081A	gamma-Chlordane	ug/kg	1.7 - 1.8	<1.7	<1.7	<1.8	9(9)
Polychlorinated Biphenyls (PCBs) FPA 8082 Arcolor-1201 ug/kg 12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <1	EPA 8081A	Methoxychlor	ug/kg	17 - 18	<17	<17		440
EPA 8082 Aroclor-1016 Ug/kg 12 <12 <12 <12 <12 -	EPA 8081A	Toxaphene	ug/kg	61 - 62	<61	<61	<62	-
EPA 8082 Aroclor-1016 Ug/kg 12 <12 <12 <12 <12 - EPA 8082 Aroclor-1221 Ug/kg 24-25 <24 <24 <25 - EPA 8082 Aroclor-1222 Ug/kg 12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <12 <1		Balanda de de Blada anda (BOBa)						
PA 8082 Arcolor-1221	DA 9092		ua/ka	12	-12	-12	-12	I
FPA 8082 Aroclor-1232 ug/kg 12 <12 <12 <12 <-12								
EPA 8082 Aroclor-1242 ug/kg 12 <12 <12 <12 - PA 8082 Aroclor-1248 ug/kg 12 <12 <12 <12 - PA 8082 Aroclor-1248 ug/kg 12 <12 <12 <12 <- 33 3								
PA 8082 Aroclor-1248 ug/kg 12 <12 <12 <-12								
EPA 8082 Aroclor-1254 ug/kg 12 <12 <12 <12 33								
	PA 8082	Aroclor-1260	ug/kg	12	<12	<12	<12	-
		Inorganics			,			
	PA 6020	Lead (total)	mg/kg	0.14 - 0.17	1.8	1.6	1.6	160

- Notes:

 1. Compositing and analyses performed by Curtis &Tompkins, Ltd. of Berkeley, CA. All results referenced to dry weight.

 2. Duplicate sample of GA9SS-COMP501-504

 3. Cleanup Levels Document (EKI, 2002)

 4. Silica Gel Cleanup procedures performed.

 5. The non-detected results for TPH-diesel and TPH-motor oil were qualified as estimated (UJ) in these two samples by DataVal, Inc.

 6. Value shown in parentheses applies if the depth to groundwater is less than 5 feet.

 7. Value is for total xylenes.

 8. Vaue is for rhotradine.

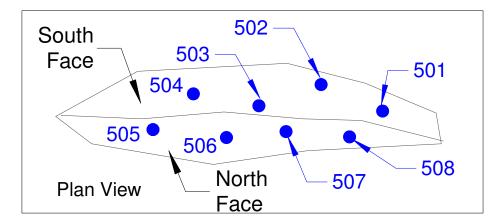
 9. Value is for endosulfan.

FIGURES



Typical View (Looking Southwest) of Soil Stockpile Showing North Face Sample Locations - 7/30/04

Approximate Location of Discrete Sample



geologica

594 Howard Street, Suite 400 San Francisco, California Discrete Sample Locations GA-9 Dune Sand Stockpile July 30, 2004 Presidio of San Francisco San Francisco, California

Figure 1

APPENDIX A

Curtis & Thompkins Analytical Laboratories Report



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA § 4710, Phone (510) 486-0900

Laboratory Number 173746

Geologica 594 Howard Street San Francisco, CA 94105 l'roject#: STANDARD

Location: GA-9 Stockpile Sampling

Sample ID	<u>Lab ID</u>
GA9SS501	173746-001
GA9SS502	173746-002
GA9SS503	173746-003
GA9SS504	173746-004
GA9SSCOMP501-504	173746-005
DUP073004-501	173746-006
DUP073004-502	173746-007
DUP073004-503	173746-008
DUP073004-504	173746-009
DUP073004COMP501-504	173746-010
GA9SS505	173746-011
GA9SS506	173746-012
GA9SS507	173746-013
GA9SS508	173746-014
GA9SSCOMP505-508	173746-015

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

ons Manager

Date:

\a+ a .

Signature:

Project Manager

Date:

NELAP # 01107CA

Page 1 of ____



Laboratory Number: 173746

Client: Geologica

Location: GA-9 Stockpile Sampling

Receipt Date: 07/30/04

CASE NAF RATIVE

This hardcopy data package contains sample and QC results for twelve soil samples that were received on July 30, 2004. The samples were received intact on ice. All soil results are reported on a dry weight basis.

Soil samples were composited 4 to 1 prior to analysis.

TPH / BTXE-Purgeable Hydrocarbons by EPA 8015B/ 8021B: High surrogate recovery was observed for Trifluorotoluene in the LCS, matrix spike and matrix spike duplicate of soil sample batch 93368. This o itlier should not affect the quality of the data, as no target compounds were detected in the associated samples or method blank. High response was observed for Trifluorotoluene in the CCVs that were analyzed on June 30, 2004 (files 213_002 and 213_015). This outlier should not affect the quality of the data, as this compound met the laboratory criteria limit. No other analytical problems were encountered.

TPH-Extractable Hydrocarbons by EPA 80 I5B: All samples were silica gel cleaned prior to analysis. No analytical problems were encountered.

Organochlorine Pesticides by EPA 8081A: All continuing calibration verifications met the average %D limit of 15% as is required by Method 8081A. No other analytical problems were encountered.

Polychlorinated Biphenyls (PCBs) by EPA 8082: No analytical problems were encountered.

Metals by EPA 6010B: No analytical problem s were encountered.



Chain of Custody

Chain of Custody Record 173746

Ford (415) 547-7880 Report Results To: baubry @ galogin net

(415)597-7883 Field Notes	530 709 CV37 1972 7:	72
7 - H	¥(1)	3 p. 12 12 12 12 12 12 12 12 12 12 12 12 12
d. フィ.	0 8 01157 0 0 7 0 4017 0 4017	1.70 1510 108 108 108
7	L 15	,
249 SC COMP SO1-504"	7	3
1 06 120 11:		
7	7	1
		*
4-COMPSO1-504"		
2	3	1
CAMP CAC. ENG W		
02-505 110		
Remarks	ł	RUSH
V V V	12/	11.
Turnaround	' > %	RETES
EDD MANNENT	CURRENT	A 213/2000
	25.50 12.50	Remarks: RESULTS AS D Turnaround Time: A8-HOUR A8-HOUR A8-HOUR Coloner To D

SOP Volume:

Client Services

Section:

1.1.2

Page:

l of l

Revision:

Effective Date: 10-May-99

Filename:

1 Number 1 of 3 F:\QC\Forms\QC\Cooler.wpd



Rev. 1, 4/95

COOLER RECEIPT CHECKLIST

Login	in#: 13740 Date Received: 7/30,04 Number Number Project 6A-9 Stock	of Coolers:	
Clien	nt: Geoligica Project GA-9 Class	V 0. 10	
	0,500	1416	
A.	Preliminary Examination Phase		
	Date Opened: 7/30/04 By (print): 1-to-		
1.	Did cooler come with a shipping slip (airlill, etc.)?	VI	ES AID
	If YES, enter carrier name and airbill number: Were custody seals on outside of cooler?	11	25(110)
2.	Were custody seals on outside of cooler?	VI	ES NO
	How many and where? Seal date:	Seal name:	
3.	were custody seals unbroken and intact at the date and time or	f arrival? VI	ES NOA//A-
4.	were custody papers dry and intact when eceived?	VI	S NO
5.	were custody papers filled out properly (ink, signed, etc.)?	₹ T	ON 6
6.	Did you sign the custody papers in the appropriate place?	(VI	₹ NO
7.	was project identifiable from custody papers?	XI	NO NO
	If YES, enter project name at the top of this form.		
8.	If required, was sufficient ice used? Samples should be 2-6 de	grees C YE	ES NO
	Type of ice: WET Temperature: O	nico	
Б			
B.	Login Phase	16	
,	Date Logged In: 7/30/04 By (print): (sign	in) 2002	
1.	Describe type of packing in cooler: Carlboard BOY		
2.	Did all bottles arrive unbroken?	VI	NO NO
3.	Were labels in good condition and complete (ID, date, time, si	gnature, etc.)?YE	S NO
4. 5.	Did bottle labels agree with custody papers?	YE	S) NO
5. 6.	Were appropriate containers used for the tests indicated?		S NO
6. 7.	Were correct preservatives added to samples?	YE	S NONA
7 . 8.	Was sufficient amount of sample sent for tests indicated?	·····ΥΕ	S NO
9.	Were bubbles absent in VOA samples? If NO, list sample Ids b	oelowYE	S NON
9.	Was the client contacted concerning this sample delivery?	YE	S NO
	If YES, give details below.		
	Who was called? By whom?	Date:	
Additi	ional Comments:		
7 Idditi	donar Comments.		
	·		· · · · · · · · · · · · · · · · · · ·
Filename	e: F:\qc\forms\qc\cooler.doc	Pov 1 4/	05



TVHg / BTXE Rest lts & QC Summary



Curtis & Tompkins Labora:ories Analytical Report Lab #: 173746 ocation: GA-9 Stockpile Sampling Client: Geologica rep: EPA 5030B Project#: STANDARD Matrix: Soil :ampled: 07/30/04 Diln Fac: 1.000 Received: 07/30/04 Batch#: 93368 .malyzed: 07/31/04

Field ID:

GA9SSCOMP501-504

Type: Lab ID:

SAMPLE

173746-005

lasis:

dry

Noisture:

2%

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0		EPA 8015B
Benzene	ND	5.1		
Toluene	ND		_	EPA 8021B
Ethylbenzene		5.1		EPA 8021B
m,p-Xylenes	ND	5.1	ug/Kg	EPA 8021B
_ =	ND	5.1	ug/Kg	EPA 8021B
o-Xylene	ND ND	5.1		EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	71-138	EIA 8015B
Bromofluorobenzene (FID)	96		EFA 8015B
Trifluorotoluene (PID)	91	55-135	EIA 8021B
Bromofluorobenzene (PID)	94	58-135	EIA 8021B

Field ID:

DUP073004COMP501-504

Type: Lab ID:

SAMPLE

173746-010

Easis:

Moisture:

dry

2왕

Analyte	Result	RL	Units	
Gasoline C7-C12	ND	0.97		Analysis
Benzene	ND	4.9		EPA 8015B
Toluene	ND	4.9		EPA 8021B
Ethylbenzene	ND		_	EPA 8021B
m,p-Xylenes	ND	4.9	_	EPA 8021B
o-Xylene	ND	4.9		EPA 8021B
	ND ND	4.9	ug/Kg 1	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	100	71-138	EP \ 8015B
Bromofluorobenzene (FID)	101		EP \ 8015B
Trifluorotoluene (PID)	96	55-135	EPA 8021B
Bromofluorobenzene (PID)	97	58-135	EPA 8021B

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Curtis & Tompkin	s Labora :ories Anal	Lytical Report
Lab #: Client: Project#:	173746 Geologica STANDARD	ocation: 'rep:	GA-9 Stockpile Sampling EPA 5030B
Matrix: Diln Fac: Batch#:	Soil 1.000 93368	<pre>lampled: leceived: nalyzed:</pre>	07/30/04 07/30/04 07/31/04

Field ID:

GA9SSCOMP505-508

Type: Lab ID: SAMPLE

173746-015

lasis:

dry 3%

Noisture:

Analyte	Result	RL	Units	, (** ** * * * * * * * * * * * * * * * *
Gasoline C7-C12	ND .	1.0	mg/Kg EP	Analysis
Benzene	ND	5.0		
Toluene	ND	5.0	ug/Kg EP	
Ethylbenzene	ND	5.0	ug/Kg EP	
m,p-Xylenes	ND		ug/Kg EP	
o-Xylene	ND	5.0	ug/Kg EP	
<u> </u>	TAD	5.0	ug/Kg EP	A 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	71-138	EI A 8015B
Bromofluorobenzene (FID)	102	73-143	EIA 8015B
Trifluorotoluene (PID)	95	55-135	EFA 8021B
Bromofluorobenzene (PID)	98		EIA 8021B

Type:

Lab ID:

BLANK

QC259703

Easis:

as received

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0		
Benzene	ND	5.0	mg/Kg EPA	
Toluene	ND	5.0	ug/Kg EPA	
Ethylbenzene	ND	5.0	ug/Kg EPA	
m,p-Xylenes	ND		ug/Kg EPA	
o-Xylene	ND	5.0	ug/Kg EPA	
	1112	5.0	ug/Kg EPA	8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	71-138	EP \ 8015B
Bromofluorobenzene (FID)	95	73-143	EP \ 8015B
Trifluorotoluene (PID)	93	55-135	EPA 8021B
Bromofluorobenzene (PID)	93	58-135	EP.4 8021B

ND= Not Detected RL= Reporting Limit Page 2 of 2



Batch QC Report

	Curtis & Tompki	ns Laboratories Anal	ytical Report
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC259704	Diln Fac:	1.000
Matrix:	Soil	Batch#:	93368
Units:	mg/Kg	Analyzed:	07/31/04

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	11.22	112	80-120

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	147 *	71-138	
Bromofluorobenzene (FID)	108	73-143	

^{*=} Value outside of QC limits; see narrative Page 1 of 1 $\,$



Batch QC Report

	Curtis & Tompki	ins Labora ories Anal	lytical Report
Lab #:	173746	location:	GA-9 Stockpile Sampling
Client:	Geologica	Irep:	EPA 5030B
Project#:	STANDARD	Inalysis:	EPA 8021B
Type:	LCS	Fasis:	as received
Lab ID:	QC259705	Iiln Fac:	1.000
Matrix:	Soil	Fatch#:	93368
Units:	ug/Kg	I nalyzed:	07/31/04

Analyte	Spiked	Result	%REC	Limits
Benzene	100.0	103.9	104	80-120
Toluene	100.0	107.6	108	80-120
Ethylbenzene	100.0	107.8	108	79-120
m,p-Xylenes	100.0	107.8	108	80-120
o-Xylene	100.0	109.1	109	80-120

Surrogate	%RE	C Limits	
Trifluorotoluene (PID)	95	55-135	
Bromofluorobenzene (PID)	96	58-135	



Batch QC Report

	Curtis & Tompkins Labo	ratories Anal	ytical Report
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	P∷ep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	GA9SSCOMP501-504	D ln Fac:	1.000
MSS Lab ID:	173746-005	Butch#:	93368
Matrix:	Soil	Sampled:	07/30/04
Units:	mg/Kg	Received:	07/30/04
Basis:	as received	Analyzed:	07/31/04

Type:

MS

Lab ID: QC259706

Analyte	MSS Result	Spiked	Result	%RE	C Limits
Gasoline C7-C12	0.1288	9.804	10.46	105	47-120

	Surrogate	%REC	Limits	
Bromofluorobenzene (FID) 105 73-143	Trifluorotoluene (FID)	143 *	71-138	
	Bromofluorobenzene (FID)	105	73-143	

Type:

MSD

Analyte

Lab ID:

QC259707

Result %REC Limits RPD Lim

Gasoline C7-C12		9.709	10.27	104	47-120	1	23
Surrogate	%REC	Limits					
Trifluorotoluene (FID)	144 *	71-138			<u> </u>	**********	
Bromofluorobenzene (FID)	105	73-143					

Spiked

^{*=} Value outside of QC limits; see narrative RPD= Relative Percent Difference Page 1 of 1

INITIAL CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompkins Laboratories

Gas Chromatograph #4 TVH/BTXE Instrument: GC04

Reviewed By: CW Date: 31-JAN-2004 00:46 Inj Vol (uL): 5000 Type: (normal) Name: tvh Calnum: 304043847001

Calibration levels:

	03WS2046 (1000X)				
Standards	03WS1660 (1000X),	03WS1661 (1000X),	03WS1662 (1000X),	03WS1663 (2000X),	03WS1663 (1000X),
Analyzed	31-JAN-2004 00:46 03WS1660 (1000X), 03WS2046 (1000X)	31-JAN-2004 01:57 03WS1661 (1000X), 03WS2046 (1000X)	31-JAN-2004 02:32 03WS1662 (1000X), 03WS2046 (1000X)	31-JAN-2004 03:07 03WS1663 (2000X), 03WS2046 (1000X)	31-JAN-2004 03:43 03WS1663 (1000X), 03WS2046 (1000X)
Samplenum	gas 1	gas 2	gas 3	gas 4	5 gas 5
Segnum	030_020 304043847020	030_022 304043847022	030_023 304043847023	030_024 304043847024	030_025 304043847025
Filename Segnum	030_020	030_022	030_023	030_024	030_025
#	1	7	m	4	5

) Flags				
r^2 a2 units avg %RSD MnR^2 MxRSD Flags	ng 1794.4 11 0.995 20	2334.1 13 0.995 20	1807.9 12 0.995 20	
r^2 ksD №	0	σ	0	
g 8.	4.4 13	4.1 13	7.9 12	
ts av	179	233	180	
umi	bu	bu	ng	
a2.	-4	4-	-4	
al	5.573E-4	4.284E-4	5.531E-4	
a0				
Type X a0	AVRG R	AVRG R	AVRG R	
LS	J 2138.4 1740.2 1655.8 1780.8 1656.6 AVRG R	2134.3	1665.7	
T4	1780.8	2280.7	1766.1	
L3	1655.8	2132.6	1658.3	
1.2	1740.2	J 2865.8 2257.1 2132.6 2280.7 2134.3	J 2191.6 1757.7 1658.3 1766.1 1665.7	
H	138.4	865.8	191.6	
Ch L1	J 2	J. 2	٦ 2	
	36-C10	36-C12	27-C12	
Analyte	Gasoline C6-C10	Gasoline C6-C12	Gasoline C7-C12	2

INITIAL CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompkins Laboratories

Instrument: GC04 Gas Chromatograph Calnum: 304262792001 Name:

Gas Chromatograph #4 TVH/BTXE
Type: (normal)

Reviewed By: MMP Date: 30-JUN-2004 12:27 Inj Vol (uL): 5000

Calibration levels:

Standards	27 04WS1076 (5000X)	03 04WS1077 (5000X)	39 04WS1078 (5000X)	16 04WS1079 (5000X)	00 04WS1080 (5000X)
Analyzed	30-JUN-2004 12:27 04WS1076 (5000X)	30-JUN-2004 13:03 04WS1077 (5000X)	30-JUN-2004 13:39 04WS1078 (5000X)	30-JUN-2004 14:16 04WS1079 (5000X)	30-JUN-2004 15:00 04WS1080 (5000X)
Samplenum	tft/bfb1	tft/bfb2	tft/bfb3	tft/bfb4	tft/bfb5
Segnum	304262792002	304262792003	304262792004	304262792005	304262792006
Filename Segnum	182 002	182_003	182 004	182_005	182_006
#	1	7	m	4	2

		5.274E-4 8.000E-4		1896.2 4	0.995 20	
	•	8.000E-4				
			of Bu	1250.0 4	0.995 20	
	1044.4 AVRG R	9.850E-4	ng 1(1015.3 4	0.995 20	
Bromofluorobenzene (PID) K 2289.6 2226.2 2143.3 2334.2 2357.9	2357.9 AVRG R	4.405E-4	ng 22	2270.2 4	0.995 20	
Trifluorotoluene (PID) L 196.99 199.58 192.22 211.06 209.0	209.07 AVKG K	0.004956	ng 2(ZU1.19 4	U. CEE.U	
Bromofluorobenzene (PID) L 427.66 429.58 410.25 447.58 446.24	446.24 AVRG R	0.002313	ng 43	432.26 4	0.995 20	

INITIAL CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompkins Laboratories

Instrument: GC04 Calnum: 304299992001 Name:

Gas Chromatograph #4 TVH/BTXE
Type: (normal)

Reviewed By: MCH Date: 26-JUL-2004 08:27 Inj Vol (uL): 5000

Calibration levels:

	4WS1342 (5000X)	4WS1342 (5000X)	WS1342 (5000X)	WS1342 (5000X)	14WS1342 (5000X)	WS1342 (5000X)	WS1342 (5000X)	WS1342 (5000X)
<u>ards</u>	3 (1000X), C	4 (1250X), (4 (500X), 04	4 (125X), 04	5 (1000X), C	5 (500X), 04	5 (250X), 04	s (500X), 04
Standards	27 04WS127)4 04WS127	10 04WS127	L5 04WS127	51 04WS127	16 04WS127)2 04WS127	38 04WS1276
Analyzed	26-JUL-2004 08:27 04WS1273 (1000X), 04WS1342 (5000X)	26-JUL-2004 09:04 04WS1274 (1250X), 04WS1342 (5000X)	26-JUL-2004 09:40 04WS1274 (500X), 04WS1342 (5000X)	26-JUL-2004 10:15 04WS1274 (125X), 04WS1342 (5000X)	26-JUL-2004 10:51 04WS1275 (1000X), 04WS1342 (5000X)	26-JUL-2004 11:26 04WS1275 (500X), 04WS1342 (5000X)	26-JUL-2004 12:02 04WS1275 (250X), 04WS1342 (5000X)	26-JUL-2004 12:38 04WS1276 (500X), 04WS1342 (5000X)
Samplenum	btxe1	mtbe1	mbtxe2	mbtxe3	mbtxe4	mbtxe5	mbtxe6	mtbe7
Segnum	304299992002	304299992003	304299992004	304299992005	304299992006	304299992007	304299992008	304299992009
Filename Segnum	208 002	208 003	208 004	208 005	208 006	208_007	208_008	208_009
#	1	7	М	4	Ŋ	9	7	∞

Anal <u>yt</u> e	Ch L1 L2 L3 L4 L5	77	L3	1.4	1.5	T.6	L7	L8	Type X	a0 a1	al a2		r^2 units avg %RSD	rî2 &RSD MnRî2 MxRSD Flags
MTBE &	K 1	432.8	1209.8	1432.8 1209.8 1021.0 1016.8		1054.2	1095.7	1082.8	AVRG R	8.8	8.846E-4	bu	1130.4 13	0.995 20
Benzene	K 3730.8	•	3342.4	3342.4 335U.8 3489.4		3615.4	3/81.0		AVKG K	7.0	4-24TO.2	היים		02 055.0
Toluene	K 3797.9	.,	3229.2	3229.2 3581.5 3706.7	3706.7	3769.8	3879.5		AVRG R	2.7	2.732E-4	вu	3660.8 6	0.995 20
Ethylbenzene	K 3395.5	.,	3038.3	3143.8 3263.6	3263.6	3255.2	3401.4		AVRG R	3.07	3.077E-4	bu	3249.6 4	0.995 20
m,p-Xylenes	K 4548.0	.,	3884.6	3884.6 3986.5 4185.1		4213.0	4327.1		AVRG R	2.38	2.386E-4	bu	4190.7 6	0.995 20
o-Xylene	K 3346.0	.,	3169.8	3302.5	3453.8	3404.6	3545.8		AVRG R	2.96	2.967E-4	bu	3370.4 4	0.995 20
MTBE	L 2.	30.93	192.31	230.93 192.31 206.22 193.36		191.84	189.55	173.89	AVRG R	0.00	0.005079	bu	196.87 9	0.995 20
Benzene	L 721.17	•	615.74	615.74 662.32 620.57	_	603.31	584.99		AVRG R	0.00	0.001576	bu	634.698	0.995 20
Toluene	L 695.55	-	648.69	648.69 676.82 654.36		634.85	617.66		AVRG R	0.00	0.001528	bu	654.65 4	0.995 20
Ethylbenzene	L 580.84		578.69	578.69 620.22 597.42	۵,	575.33	556.30		AVRG R	0.00	0.001710	bu	584.80 4	0.995 20
m,p-Xylenes	L 739.48		707.10	707.10 756.72 741.89	_	711.21	676.21		AVRG R	0.00	0.001385	bu	722.10 4	0.995 20
o-Xylene	L 605.25	-	592.31	592.31 639.51 622.88	_	595.15 562.15	562.15		AVRG R	0.00	0.001659	bu	602.87 4	0.995 20

CONTINUING CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompkins Laboratories

Instid : GC04 Run Name : QC 159705 IDF : 1.0

Seqnum : 304307304001 Filename : 21 _001 Injected : 31-JUL-2004 09:44

Caltype :

Standards: 04WS1386 (1000X), 04WS1342 (5)00X)

				Avg					- 191 P	i Lijina	10.000		
Analyte	Ch	Calnum	Caldate	RF/CF	RF/CF	SpkAmt	QuantAmt	Units	%D Max	ያከ _ሞ ነ ጋሪ			
MTBE	K	304299992001	26-JUL-2004	1130.4	1158.6	100.0000			2	15	18		
MTBE	L	304299992001	26-JUL-2004						_	15 c- 1		. ,	
Benzene	K	304299992001	26-JUL-2004						4	15 u	/	1/1+	
Benzene	L	304299992001	26-JUL-2004					-	-4	15 u			
Toluene	K	304299992001	26-JUL-2004					-	8	15 u			
Toluene	L	304299992001	26-JUL-2004					-	2	15 u 15			
Ethylbenzene	K	304299992001	26-JUL-2004							15 15 u			
Ethylbenzene	L	304299992001	26-JUL-2004					_	-	15 u			
m,p-Xylenes	K	304299992001	26-JUL-2004					-	-	15 15 u			
m,p-Xylenes	L	304299992001	26-JUL-2004					•	_	15 u			
o-Xylene	K	304299992001	26-JUL-2004					_		15 u			
o-Xylene	L	304299992001	26-JUL-2004					-		15 u 15			
Trifluorotoluene (FID)	J	304262792001	30-JUN-2004						•	15			
Bromofluorobenzene (FID)	J	304262792001	30-JUN-2004					_	_	15			
Trifluorotoluene (PID)	K	304262792001	30-JUN-2004					_	-	15 15 u			
Trifluorotoluene (PID)	L	304262792001	30-JUN-2004					-	_		PARS		
Bromofluorobenzene (PID)	K	304262792001	30-JUN-2004					-		15 C- 15 u	F/13-5		
Bromofluorobenzene (PID)	L	304262792001	30-JUN-2004					-	-	15 u 15			

omme status

Inhouse (mits TFT (PID) 71-135 PSFV3 (PID) 73-143 MMP

-=low bias c=CCV u=use Page 1 of 1

CONTINUING CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompkins Laboratories

Instid : GC04 Run Name : QC259704

IDF : 1.0 Injected : 31-JUL-2004 10:20 Filename : 213 002 Segnum : 304307304002

Caltype :

Standards: 04WS1388 (1000X), 04WS1342 (50(0X)

				Avg							
Analyte	Ch	Calnum	Caldate	RF/CF R	/CF	SpkAmt	QuantAmt	Units	%D Max	%D Flags	
Gasoline C7-C12	J	304043847001	31-JAN-2004	1807.9 2	28.4	10000.00	11219.99	ng	12	15 u	
Gasoline C6-C10	J	304043847001	31-JAN-2004	1794.4 2	15.6	10000.00	11232.80	ng	12	15	
Gasoline C6-C12	J	304043847001	31-JAN-2004	2334.1 2	71.1	10000.00	11443.80	ng	14	15	
Trifluorotoluene (FID)	J	304262792001	30-JUN-2004	1896.2 2	81.5	450.0000	660.0908	ng	47	15 c+ u	Friozinton
Bromofluorobenzene (FID)	J	304262792001	30-JUN-2004	1250.0 1	49.3	450.0000	485.7546	ng	8	15 u	wistel

TFT (F10) 71-136% BFB(FO) +3-1430

+=high bias c=CCV u=use Page 1 of 1

CONTINUING CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompki is Laboratories

Instid : GC04 Run Name : mb:xe Seqnum : 304307304013 Filename : 213_013

IDF : 1.0 Injected : 31-JUL-2004 17:25

Caltype :

Standards: 04WS1386 (666.7X), 04WS1342 (5000X)

				Avg									-
Analyte	Ch	Calnum	Caldate	RF/CF	RF/CF	SpkAmt	QuantAmt	Units	%D Max	%D Flags			
Trifluorotoluene (FID)	J	304262792001	30-JUN-2004	1896.2	1794.7			A A A A A A A A A A A A A A A A A A A	- 5	15			
Bromofluorobenzene (FID)	J	304262792001	30-JUN-2004						-6	15			
MTBE	K	304299992001	26-JUL-2004					_	-6	15			
Benzene	ĸ	304299992001	26-JUL-2004					-	-1	15			
Toluene	ĸ	304299992001	26-JUL-2004						5	15			
Ethylbenzene	K	304299992001	26-JUL-2004						2	15			
m,p-Xylenes	K	304299992001	26-JUL-2004					-	3	15			
o-Xylene	K	304299992001	26-JUL-2004					_	5	15			
Trifluorotoluene (PID)	K	304262792001	30-JUN-2004					-	-8	15			
Bromofluorobenzene (PID)	K	304262792001	30-JUN-2004						-6	15			
MTBE	L	304299992001	26-JUL-2004						15	15			
Benzene	L	304299992001	26-JUL-2004						-3	15			
Toluene	L	304299992001	26-JUL-2004					-	0	15			
Ethylbenzene	L	304299992001	26-JUL-2004					•	2	15			
m,p-Xylenes	L	304299992001	26-JUL-2004					~	5	15			
o-Xylene	L	304299992001	26-JUL-2004					-	5	15			
Trifluorotoluene (PID)	L	304262792001	30-JUN-2004					-	18	15 c-	PASS		
Bromofluorobenzene (PID)	L	304262792001	30-JUN-2004					-	13	15 6-	.,,	i	

Inhouse lamits TFT 55-13:7. 1943 58-135 76 mmr 8/2/m

-=low bias c=CCV Page 1 of 1

CONTINUING CALIBRATION REPORT FOR 173746 GCVOA Soil Curtis & Tompkins Laboratories

Instid : GC04 Run Name : tvh IDF : 1.0

Seqnum : 304307304015 Filename : 213 015 Injected : 31-JUL-2004 18:36

Caltype :

Standards: 04WS1388 (666.7X), 04WS1342 (5(00X)

				Avg							
Analyte	Ch	Calnum	Caldate	RF/CF	R /CF	SpkAmt	QuantAmt	Units	%D Max	%D Flag	9 (1) (1) (2) (3) (4) (5) (4) (5) (6) (6) (6) (6) (6) (6) (6) (6) (6) (6
Gasoline C6-C10	J	304043847001	31-JAN-2004	1794.4	1 37.6	15000.00	16197.16	ng	8	15	
Gasoline C6-C12	J	304043847001	31-JAN-2004	2334.1	2 39.5	15000.00	16320.28	ng	9	15	
Gasoline C7-C12	J	304043847001	31-JAN-2004	1807.9	1 13.3	15000.00	15874.71	ng	6	15	
Trifluorotoluene (FID)	J	304262792001	30-JUN-2004	1896.2	2 72.3	450.0000	705.3776	ng	57	15 C+ (=	1 welutim
Bromofluorobenzene (FID)	J	304262792001	30-JUN-2004	1250.0	1 61.2	450.0000	454.0406	ng	1	15	wister.
Trifluorotoluene (PID)	K	304262792001	30-JUN-2004	1015.3	1 56.2	450.0000	512.4507	ng	14	15	*
Bromofluorobenzene (PID)	K	304262792001	30-JUN-2004	2270.2	2 21.4	450.0000	400.6673	ng	-11	15	
Trifluorotoluene (PID)	L	304262792001	30-JUN-2004	201.79	3 8.44	450.0000	799.3572	ng	78	15 c+	NIA
Bromofluorobenzene (PID)	L	304262792001	30-JUN-2004	432.26	3 8.10	450.0000	393.6095	ng	-13	15	**

MMP 8(2/14)
TET (FID) 71-13%
AFIR (FID) 73 143%

+=high bias c=CCV Page 1 of 1

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 93368

Date Started: 31-JUL-2004

Aralysis : N/A Bgroup : TVH

Batched by : Jason Poulton Department : GC Organics

Sample	Туре		Client	Matrix	Analyses	Due Date
173746-005			Geologica	Soil	BTXE, TVH	03-AUG-2004
173746-010			Geologica	Soil	BTXE, TVH	03-AUG-2004
173746-015			Geologica	Soil	BTXE, TVH	03-AUG-2004
173753-001			MWH	Miscell.	BTXE, TVH	06-AUG-2004
173754-003			MWH	Miscell.	BTXE, TVH	06-AUG-2004
OC259703	MB			Soil		
OC259704	LCS			Soil		
OC259705	LCS			Soil		
OC259706	MS	of 173746-005		Soil		
QC259707	MSD	of 173746-005		Soil		

28 PROJECT	исоч	Siquence Log Book	Notebook No. <u>Bu 1944</u> Continued From Page
	SEQUENCE SUMMARY Curtis & Tompkins Laboratories Sequence: 304307304 Instrument: GC04 Gas Chromatograph #4 TVH/BTXE Analytical Method: EPA 8015B SOP Version: TVH_BTXE_rv11	# Fileneme Type Samplenum Batch Matrix Analyzed 1DP IOC SPK u. V. D. Bidd Sci 1 31-7012-2004 10:41 1.0 1 5000 13 2	Stds used: 3-04WS1386 2-PAWS1388 Analyst: Miderly Date: 25/02/24 Page 1 027
		A Prod on	Continued on Page — — — — — — — — — — — — — — — — — — —
Mica	In Lun Signed	08/02/14 20	Signed Sly

10 PROJECT	6009	Symule	Ly Boil	^ N	lotebook No. Continued	From Page	977
			V				
		Begun: 30-JUN-2004 ds Used <u>」 LR</u>					S.
	SEQUENCE SUMMARY urtis & Tompkins Laborate	SOP Vers SOP Vers Analyzed 30-JUN-2004 11:52 30-JUN-2004 13:23 30-JUN-2004 13:33	5:00 1.0	•			4=04WS1078 5=04WS1079 6=04WS1080 30 -04
	Sequence: 304262792 Instrument: GCO4 Analytical Method; EPA 8015B	YPE Sampl TAL LEL/bi AL LEL/bi AL LEL/bi AL LEL/bi	CAL				Analyst: Page 1 of M Date: 0 50 -04
							P. A. Paa
							Continued on Page
		6-2	20.09 2		Inderstood By		4./M
1	Signed		Date	W	Signed		Date

acoy Segueire PROJECT **Continued From Page** 2/8 Begun: 26-JUL-2004 0755 WSG Stds Used VL DH Gas Chromatograph #4 TVH/BTXE SOP Version: TVH_BTXE_rv11 SOP Version: TVH_BTXE_rv11 5000 IOC SPK uL Curtis & Tompkins Laboratories 3=04WS1274 4=04WS1275 5=04WS1276 6=04WS1075 SEQUENCE SUMMARY 26-JUL-2004 12:38 1.0 26-JUL-2004 13:49 1.0 26-JUL-2004 12:02 1.0 26-JUL-2004 13:13 08:27 09:04 26-JUL-2004 10:15 26-JUL-2004 10:51 26-JUL-2004 11:26 26-JUL-2004 07:52 09:40 27-JUL-2004 08:51 26-JUL-2004 26-JUL-2004 26-JUL-2004 26-JUL-2004 Batch Matrix Analyzed Instrument: GC04 'Date: Analytical Method: EPA 8015B Analytical Method: EPA 8021B mbtxe6 mbtxe2 mbtxe3 mbtxe4 mbtxe5 mtbe7 mtbe1 mbtxe btxe1 mbtxe 9 Sequence: 30429992 Stds used: 1=04WS1342 ICAL ICAL ICAL ICAL ICAL ICAL ICAL Filename 002 208_002 003 208_003 208_011 208_008 208 010 208 012 of 208 001 208 004 208_005 006 208 006 208 009 Analyst: Page 1 of 208 007 007 800 600 010 900 004 012 001 Continued on Page -Read and Understood By Date

Signed

Date

Signed



TEH results & QC Summary



Total Extractabl : Hydrocarbons Lab #: 173746 GA-9 Stockpile Sampling SHAKER TABLE EPA 8015B Lacation: Client: P: ep: Geologica Project#: STANDĂRD Analysis: Matrix: Soil Sampled: Received: 07/30/04 07/30/04 07/31/04 Units: mg/Kg Diln Fac: 1.000 P: epared: Batch#: 93369 Aı alyzed: 08/01/04

Field ID:

GA9SSCOMP501-504

SAMPLE

Type: Lab ID: 173746-005 Basis:

dry

Mcisture: Cleanup Method:

2% EPA 3630C

Analyte Result Diesel C12-C24 ND 1.0 Motor Oil C24-C36 ND

Surrogate %REC Limits Hexacosane 56 52-131

Field ID: Type:

Lab ID:

DUP073004COMP501-504

SAMPLE

Basis:

dry 28

173746-010

Mcisture: Cleanup Method:

EPA 3630C

Diesel C12-C24 Result 1.0 Motor Oil C24-C36 ND 5.1

Surrogate %REC Limits Hexacosane 52-131

Field ID: Type:

Lab ID:

GA9SSCOMP505-508

SAMPLE

173746-015

Basis:

dry

Mcisture:

3ક

Cleanup Method: EPA 3630C

Analyte Diesel C12-C24 Result ND 1.0 Motor Oil C24-C36 ND

Surrogate Limits Hexacosane 52-131

Type: Lab ID: BLANK QC259708

Basis:

as received Cleanup Method: EPA 3630C

Analyte Result Diesel C12-C24 ND 1.0 Motor Oil C24-C36 ND 5.0

Surrogate %REC Limits Hexacosane 52-131

ND= Not Detected RL= Reporting Limit Page 1 of 1



Batch QC Report

	Tota	l Extractable Hydroca	rbons
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	Pr∈p:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC259709	Bat ch#:	93369
Matrix:	Soil	Pr∈pared:	07/31/04
Units:	mg/Kg	Analyzed:	08/01/04
Basis:	as received	-	

Cleanup Method: EPA 3630C

Diesel C12-C24 50.31 34.55 69 55-128		Anal	yte Spiked	Resul	t	%REC	Limits
	Diesel	C12-C24	50.31	34		69	CC 100

Surrogate	%REC	Limits	
Hexacosane	59	52-131	

INITIAL CALIBRATION REPORT FOR 173746 TEH Soil Curtis & Tompkins Laboratories

Gas Chromatograph #15 (Channel B) TEH Calnum: 164283116001 Instrument: GC15B

Date: 14-JUL-2004 15:05 Inj Vol (uL): Reviewed By: CW Type: (normal) Name: diesel

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Calibration levels:

Standards 14-JUL-2004 15:05 04WS1223 14-JUL-2004 16:31 04WS1220 14-JUL-2004 17:00 04WS1219 14-JUL-2004 17:29 04WS1218 04WS1222 14-JUL-2004 16:02 04WS1221 14-JUL-2004 17:58 04WS1217 14-JUL-2004 15:33 Analyzed Samplenum dsl dsl dsl ds1ds1dsl 164283116002 164283116005 164283116006 164283116003 164283116004 164283116007 164283116008 Filename Segnum 196b002 1965003 196b004 196b005 196b006 1965007 196b008

r^2 *RSD MnR^2 MxRSD Flags	0.995 20	0 995 20	0.995 20	0.995 20	0.995 20	0.995 20	5 20
MaR	0.99	0	0.99	0.99	0.99	0.99	0.995 20
1	3	Œ	9	Ŋ	9	7	7
units avq	mg/L 20974 6	21121	21153	20470	17835	17983	mg/L 18016 7
units	mg/L	ma/L	mg/L	mq/L	mg/L	mg/L	mg/L
a2							
al	4.768E-5	4.735E-5	4.727E-5	4.885E-5	.607E-5	.561E-5	5.551E-5
	4.	4	4	4	.0	5.	5.
Type X a0	AVRG R						
1. 1.	21471 #	21646 7	21698 #	20874 #	18507 #	18683 2	18740 A
97	21235 2	21423 2	21472 2	20674 2	18365 1	18553 1	18604 1
1.5	22542 2	22719 2	22770 2	21906 2	19118 1	19295 1	19346 1
F4	20800 2	20983 2	21027 2	20231 2	17586 1	17768 1	17812 1
Ľ3							17804 1
	20824	20984	21007	20228	17621	17781	
1.2	21499	21647	21651	20933	18153	18301	18306
11	18446	18446	18446	18446	15496	15496	15496
	·C22	·C24	.C28	.C20	.C22	C24	C32
Analyte	Diesel C10-C22	Diesel C10-C24	Diesel C10-C28	Diesel C10-C20	Diesel C12-C22	Diesel C12-C24	Diesel C12-C32

INITIAL CALIBRATION REPORT FOR 173746 TEH Soil Curtis & Tompkins Laboratories

Reviewed By: CW TEH Gas Chromatograph #15 (Channel B) Instrument: GC15B

Date: 14-JUL-2004 18:57 Inj Vol (uL): Type: (normal) Name: motoroil Calnum: 164283116002

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Calibration levels:

Standards 14-JUL-2004 19:54 04WS1210 14-JUL-2004 20:23 04WS1211 14-JUL-2004 20:52 04WS1212 14-JUL-2004 18:57 04WS1208 14-JUL-2004 19:25 04WS1209 Analyzed Samplenum SE SE 164283116010 164283116012 164283116013 164283116011 164283116014 Filename Segnum 1965010 196b013 196b014 196b011 196b012 # 0 4

r^2 a2 units avg *RSD MnR^2 MxRSD Flags	mg/L 17759 10 0.995 20	0.995 20	0.995 20	mg/L 12189 13 0.995 20
2,7 300 kg	•	Ü		
- ## - #	59 1(72 8	51 11	39 1
s avc	177	mg/L 15072	mg/L 15651 11	1218
a2 unit	∏ mg/r	T/Bm	пg/Г	mg/L
a1	5.631E-5	6.635E-5	6.389E-5	8.204E-5
Type X a0				
Type	AVRG R	AVRG R	AVRG R	AVRG R
1.5	17449 15242	13283	13355	10036
L4 L5	17449	15185	15683	12446
£1	19205	16058	17639 16936	13287
L2	19895	16188	17639	14055
73	17004	14644	14644	11123
	C20-C36	C22-C32	C22-C36	C24-C36
Analyte	Motor Oil C20-C36	Motor 0il C22-C32	Motops 0il C22-C36	Motor Oil C24-C36

INITIAL CALIBRATION REPORT FOR 173746 TEH Soil Curtis & Tompkins Laboratories

I Reviewed By: CW
Date: 14-JUL-2004 22:18 Inj Vol (uL): Gas Chromatograph #15 (Channel B) TEH Type: (normal) Name: hxcs Calnum: 164283116004 Instrument: GC15B

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Calibration levels:

Standards 14-JUL-2004 22:18 04WS0533 14-JUL-2004 23:16 04WS0535 14-JUL-2004 22:47 04WS0534 14-JUL-2004 23:44 04WS0536 15-JUL-2004 00:13 04WS0537 Analyzed Samplenum hex hex hex hex hex 164283116019 164283116020 164283116017 164283116018 164283116021 Filename Segnum 196b017 196b019 196b020 196b018 196b021 ᄴ

FB. 13		
lags.		
ekersd f		I
9	995 20	
2 MmR ²	0.0	
r^2 \$RSD	4	l
avg	23609	
mits	ıg/L	I
r a0 al a2 units avg %R	=	
a0 al a		ĺ
al	36E-5	
aO al	4.2	
r ^r 2 pe X a0 al a2 units avg %RSD MnR ^r 2		
Type X	KG R	l
. Type X	AVI	
2	24259	
27	458	
3 L	23	
b1 b2 b3 b4	23772	
11 12	4448	
LZ	4	
12	2210	
0		
yte	ne	
- 24	acosa	
Anal	He	

CONTINUING CALIBRATION SUMMARY FOR 173746 TEH Soil Curtis & Tompkin; Laboratories

Analyte: Diesel C12-C24

						Avg			
Instid	Ch	Seqnum	Injected	Calnum	Caldate	RF/CF	RF/CF	SpkAmt QntAmt Units	%D Max %D Flags
GC11A	Α	114309132002	01-AUG-2004 16:41	114306371001	30-JUL-2004	22204	21963	500.00 494.58 mg/L	-1 15 , NA CWJ/3/04
GC11A	A	114309132016	01-AUG-2004 23:25	114306371001	30-JUL-2004	22204	23381	1000.0 1053.0 mg/L	5 15
GC15B	В	164309006004	01-AUG-2004 15:53	164283116001	14-JUL-2004	17983	18161	500.00 504.97 mg/L	1 15
GC15B	В	164309006018	02-AUG-2004 00:02	164283116001	14-JUL-2004	17983	18507	1000.0 1029.2 mg/L	3 15
GC15B	В	164310380003	02-AUG-2004 13:57	164283116001	14-JUL-2004	17983	18836	500.00 523.73 mg/L	5 15
GC15B	В	164310380016	02-AUG-2004 21:22	164283116001	14-JUL-2004	17983	19041	1000.0 1058.9 mg/L	5 15 NA

CONTINUING CALIBRATION SUMMARY FOR 173746 TEH Soil Curtis & Tompkirs Laboratories

Analyte: Motor Oil C24-C36

Instid	Ch	Seqnum	Injected		Calnum	Caldate	Avg RF/CF	RF/CF	SpkAmt	OntAmt	Units	% D	Max %D Flags	
GC15B	В	164309006003	01-AUG-2004	15:06	164283116002	14-JUL-20(4	12189	12541	500.00	514.41	mg/L	3	15	
GC15B		164309006016										7	15	

CONTINUING CALIBRATION SUMMARY FOR 173746 TEH Soil Curtis & Tompkin; Laboratories

Analyte: Hexacosane

						Avg							
Instid	Ch	Seqnum	Injected	Calnum	Caldate	RF/CF	RF/CF	SpkAmt	QntAmt	Units	%D №	tax %D Flags	
GC11A	Α	114309132002	01-AUG-2004 16:41	114301759001	27-JUL-2004	27882	28859	50.000	51.752	mg/L	4 1	5 NA C	i H. L.
GC11A	Α	114309132016	01-AUG-2004 23:25	114301759001	27-JUL-2004	27882	30732	50.000	55.111	mg/L	10 1	.5 MM C	1/3 (3-1
GC15B	В	164309006003	01-AUG-2004 15:06	164283116004	14-JUL-2004	23609	20621	50.000	43.672	mg/L	-13 1	.5	
GC15B	В	164309006016	01-AUG-2004 23:05	164283116004	14-JUL-2004	23609	23148	50.000	49.025	mg/L	-2 1	.5	
GC15B	В	164310380003	02-AUG-2004 13:57	164283116004	14-JUL-2004	23609	20446	50.000	43.302	mg/L	-13 1	.5 > NA	
GC15B	В	164310380016	02-AUG-2004 21:22	164283116004	14-JUL-2004	23609	21368	50.000	45.256		-9 1	.5	

SEQUENCE SUMMARY FOR 173746 TEH Soil Curtis & Tompkins Laboratories

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv11 Instrument: GC15B Analytical Method: EPA 8015B Sequence: 164283116

Begun: 14-JUL-2004

>LR																														
VL pH Stds Used		1	2	3	4		9	7		8	6	10	11	12	13		14	115	16	17	18		19	1 20			23			
IQC SPK uL																														
Batch Matrix Analyzed IDF	14-JUL-2004 14:36 1.0	14-JUL-2004 15:05 1.0	14-JUL-2004 15:33 1.0	14-JUL-2004 16:02 1.0	14-JUL-2004 16:31 1.0	14-JUL-2004 17:00 1.0	14-JUL-2004 17:29 1.0	14-JUL-2004 17:58 1.0	14-JUL-2004 18:28 1.0	14-JUL-2004 18:57 1.0	14-JUL-2004 19:25 1.0	14-JUL-2004 19:54 1.0	14-JUL-2004 20:23 1.0	14-JUL-2004 20:52 1.0	14-JUL-2004 21:21 1.0	מיד מריזק בממק -חסמ - צד	14-JUL-2004 22:18 1.0	14-JUL-2004 22:47 1.0	14-JUL-2004 23:16 1.0	14-JUL-2004 23:44 1.0	15-JUL-2004 00:13 1.0	15-JUL-2004 00:42 1.0	15-JUL-2004 01:10 1.0	15-JUL-2004 01:39 1.0	15-JUL-2004 02:08 1.0	15-JUL-2004 02:36 1.0	15-JUL-2004 03:05 1.0	15-JUL-2004 03:34 1.0	15-JUL-2004 04:02 1.0	15-JUL-2004 04:31 1.0
Samplenum	ib	dsl	ib	Ош	ош	ОШ	ОШ	ош	Ош	: }	hex	hex	hex	hex	hex	ib	jp5	jp5	jp5	jp5	jp5	qi	c12-16	c12-60						
# Filename Type	1 1965001	002 196b002 ICAL	003 196b003 ICAL	004 196b004 ICAL	005 196b005 ICAL	006 196b006 ICAL	007 196b007 ICAL	008 196b008 ICAL	X 60091600	010 196b010 ICAL	011 196b011 ICAL	012 196b012 ICAL	013 196b013 ICAL	014 196b014 ICAL		מיים דייתיים פיים	017 196b017 ICAL	018 196b018 ICAL	019 196b019 ICAL	020 196b020 ICAL	021 196b021 ICAL	022 196b022 X	023 196b023 ICAL	024 196b024 ICAL	025 196b025 ICAL	026 196b026 ICAL	027 196b027 ICAL	028 196b028 X	029 196b029 X	030 196b030 X

Stds used: 1=04WS1223 2=04WS1222 3=04WS1221 4=04WS1220 5=04WS1219 6=04WS1218 7=04WS1217 8=04WS1208 9=04WS1209 10=04WS1210 11=04WS1211 12=04WS1212 13=04WS1212 13=04WS1233 15=04WS0534 16=04WS0535 17=04WS0536 18=04WS0537 19=04WS0572 20=04WS0573 21=04WS0574 22=04WS0575 23=04WS0575 23=04WS0576 24=04WS0532 25=04WS0513

SEQUENCE SUMMARY FOR 173746 TEH Soil Curtis & Tompkins Laboratories

Sequence: 164283116 Instrument: GC15B Gas Chro Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv11

Begun: 14-JUL-2004

# Filename Type	Samplenum	# Filename Type Samplenum Batch Matrix Analyzed IDF	IOC SPK 111,	IOC SPK 11, VI. pH Stds 11sed	
031 196b031 X	c50	004 04:59			>UK
032 196b032 X	ib	15-JUL-2004 05:28 1.0			
033 196b033 ICV	dsl	15-JUL-2004 05:57 1.0	,,	70	
034 196b034 X	qi	15-JUL-2004 06:25 1.0		F77	
035 196b035 CCV	dsl	15-JUL-2004 06:54 1.0	۳	2.0	
036 196b036 X	ib	2004 07:22	ז	24	
037 196b037 CCV	om	15-JUL-2004 07:51 1.0	٣	20	
038 196b038 X	ib	15-JUL-2004 08:20 1.0	ר	0.77	
039 196b039 CCV	jp5	15-JUL-2004 08:48 1.0	~	2.7	

Stds used: 1=04WS1223 2=04WS1222 3=04WS1221 4=04WS1220 5=04WS1219 6=04WS1218 7=04WS1217 8=04WS1208 9=04WS1210 10=04WS1211 11=04WS1211 12=04WS1212 13=04WS1012 14=04WS0533 15=04WS0534 16=04WS0535 17=04WS0536 18=04WS0537 19=04WS0572 20=04WS0573 21=04WS0574 22=04WS0575 23=04WS0576 24=04WS0983 25=04WS1144 26=04WS1249 27=04WS0513

SEQUENCE SUMMARY FOR 173746 TEH Soil Curtis & Tompkins Laboratories

Begun: 01-AUG-2004 Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv11 Sequence: 164309006 Instrument: GC15B Analytical Method: EPA 8015B

Filename Ty	Type	Samplenum	Batch Matrix Analy	Analyzed	IDF	PDF	IQC SPK	ηŢ	Stds Used	>LR
214b001 X		qi	:	G-2004 14:	06 1.0					
214b002 X		dsl		01-AUG-2004 14:	:37 1.0				1	
214b003 CC	25	mo		01-AUG-2004 15:	:06 1.0	1.0		3	2	
214b004 CCV	25	dsl		01-AUG-2004 15:	53 1.0	1.0		٣	1	
214b005 BL	BLANK	QC259708 S	93369 Soil	G-2004 17:	51 1.0	0.09998	9	ж		
214b006 LC	ICS	QC259709 S	93369 Soil	01-AUG-2004 18:	19 1.0	0.1006		3		
214b007 SA	SAMPLE	173746-005 S	93369 Soil	01-AUG-2004 18:	48 1.0	0.1002		33		
214b008 SA	SAMPLE	173724-002 S	93369 Soil	01-AUG-2004 19:	16 1.	0.1002		3		
214b009 SA	SAMPLE	173711-002 S	93369 Soil	01-AUG-2004 19:	45 1.0	0.1003		3		
214b010 SA	SAMPLE	173711-001 S	93369 Soil	01-AUG-2004 20:	:13 1.0	0.1004		3		
214b011 SA	SAMPLE	173746-015 S	93369 Soil	01-AUG-2004 20:	42 1.0	0.09964		٣		
214b012 SA	SAMPLE	173746-010 S	93369 Soil	01-AUG-2004 21:	11 1.0	0.0994		3		
214b013 SA	SAMPLE	173711-003 S	93369 Soil	01-AUG-2004 21:	39 1.0	0.1003		33		
	SAMPLE	173688-002 S	93369 Soil	01-AUG-2004 22:	08 1.0	0.09921		٣		
214b015 X		ib		01-AUG-2004 22::	36 1					
אייי הדהתדדק	>)		0.04 F004-P04-40	. i			. 1	- 1	
214b017 X		ccv		01-AUG-2004 23:	34 1.				3	
214b018 CCV	25	dsl		G-2004 00:	02 1.	1.0		٣	3	
214b019 SA	SAMPLE	173688-001 S	93369 Soil	G-2004 00	:31 1.0	0.1002		m		
214b020 SA	SAMPLE	173698-001	e 1	G-2004 01	:00 20.0	0.1989	7	m	8:DSL:12=8168.6	63
214b021 X		ib		02-AUG-2004 01:3	28 1.0					
214b022 SA	SAMPLE	173702-022	93369 Soil	G-2004 01:	57 1.0	0.1003		m		
214b023 SA	SAMPLE	173702-024	93369 Soil	02	:26 1.0	0.09972		m		
214b024 SA	SAMPLE	173702-025	93369 Soil	02-AUG-2004 02:	54 1.0	0.1003		m	100	
214b025 SA	SAMPLE	173702-026	93369 Soil	02-AUG-2004 03:23	23 1.0	0.09978		m		
214b026 SA	SAMPLE	173702-021	93369 Soil	02-AUG-2004 03:	:52 1.0	0.1659		د		
214b027 SA	SAMPLE	173702-027	93369 Soil	02-AUG-2004 04:	20 1.0	0.1002		т т		
214b028 SA	SAMPLE	173702-028	93369 Soil	02-AUG-2004 04:4	49 1.0	0.0999		т т		
214b029 SA	SAMPLE	173726-001	93369 Soil	05	:18 1.0	0.09978	н	М	10:DSL:12=18214.	6
214b030 CCV	25	шо		02-AUG-2004 05:4	:46 1.0	1.0		m m	2	
214b031 X		ccv		02-AUG-2004 06:1	15 1.0				4	

Stds used: 1=04WS1410 2=04WS1425 3=04WS1324 4=04WS1277

7

SEQUENCE SUMMARY FOR 173746 TEH Soil Curtis & Tompkins Laboratories

Sequence: 164309006 Instrument: GC15B Ga Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv11

Begun: 01-AUG-2004

>LR Stds Used IOC SPK uL PDF IDF 02-AUG-2004 06:44 1.0 Batch Matrix Analyzed Samplenum dsl # Filename Type 032 214b032 CCV

4 = 04WS1277
3=04WS1324
2=04WS1425
1=04WS1410
nseq:
Stds

-2004 14:44	04WS1409A 04WS1189F TEH1_rv9	Clean Comments Method	3630C sg	3630c sg										3630c sg		3630C sg			ШSS	3630C sg	3630c sg	מת יייי		3630C sg		
31-JUL-2004	Spike #1 ID Spike #2 ID Spike #3 ID SOP Version	Sp 2 Sp 3 Analyses Vol Vol	Э ТЕН) TEH) TEH	о тен) ТЕН	ТЕН) TEH) TEH) TEH) TEH) TEH) TEH	ТЕН) TEH) TEH	TEH () TEH) TEH) TEH	-	тен тен	TEH	TEH	TEH
ary		Sp 1	-	-	-	-	-	-	-	-	-	-		-	-	-	1	٦	-	-	-		1	-	-	-
Preparation Summary	H A	al Prep Clean pH D.F. D.F.	00180	0.099206 1	0.198886 1	0.165948 1	0.100281 1	0.099721 1	0.100321 1	0.099780 1	0.100200 1	0.099900 1	0.099681 1	0.100381 1	0.100281 1	0.100301 1	0.100180 1	0.099780 1	0.100000 1	0.100200 1	0.099404 1		0.099980 1	0.100624 1	0.100503 1	0.100523 1
repa	TEH N/A g	Units Final	2	Ŋ	9	5	2	'n	ر د	ر د	5	ر ,	ľ	S	'n	ر م	2	۲,	'n	'n	2	13	2	ın.	۰,	'n
Sample E	Analysis Bgroup Units Clean-up	Init Un	√p 19.94			30.13 g	49.86 gV	50.14 9/	^6 78.67	50.11 g	6.64 g 6.64	50.05 gV	50.16 g	49.81 g	76 98.67	49.85 gV	49.91 g	50.11 g/	50 g	6.64 g	50.3 g	, , ,	50.01 gV		49.75 g	76 42.67 √6
	CHE	Matrix	l Solutions Soil	Solutions Soil	Miscell.	Soil	Soil	Soil	Soil	Soil	l Solutions Soil	s Soil	s Soil	Soil	Soil	7	Soil	Soil	Soil	Soil						
Curtis & Tompkins Laboratories	93369 31-JUL-2004 Kevin Riley SHAKER TABLE	Client	Innovative Technical	Innovative Technical Solutions Soil	MAH	URS Corporation	URS Corporation	URS Corporation	URS Corporation	URS Corporation	URS Corporation	URS Corporation		URS Corporation	URS Corporation	URS Corporation	Innovative Technical Solutions	Tan Phung Associates	Tan Phung Associates	Geologica	Geologica	33.50				
Curtis & I																									of 173726-002	of 173726-002
	Batch Number : Date Extracted: Extracted by : Prep Method :	Sample Type	173688-001	173688-002	173698-001	173702-021	173702-022	173702-024	173702-025	173702-026	173702-027	173702-028	173709-001	173711-001	173711-002	173711-003	173724-002	173726-001	173726-002	1737465-005	173748-010	112	QC259708 MB		QC259710 MS	QC259711 MSD

X -

Relinquished By:_

Prep Chemist:_

Reviewed By:

Received By: Myn MS

Date: 8/03/04

TEH 8015 SOII, PREP LOG

BK 1934

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- . -				Pag	e 62
LIMS Batch No: 93369	Extraction Me	thod:		Cleanup Method (if n	ecessary):
LIMS Analysis TEH				EPA 3630 Silic	
Extracted by: KR				Other	
		•		L other	
Date Extracted: 7.31.64	Other _				
			~.		
		Pinal		_	
Sample # & letter		Volu ne (mL)		needed) Commer	<u>its</u>
MB QC259708	50,01	,5,0	X		
LCS 19	49.69		3		
MS 10	49.75				
MSD 11	49,74				
s 173685-001:14	49,91		X		
	50.40	 	1		
172/00 (0120)	85.08	10.0	 	would not cone furth	6
173698-201: B		10.0		Would ret cone funt	141
173702-021:A	30.13	5.05.0%			
1 22	49.86				
10 24	50.14		<u> </u>		
25	49.84				
76	50.11				
27	49.90				
185	50.05				
15 173709-001: comp AD	50.16				
173711-001: CompA-D	19.81		X		
7 7 7	49.86		又		
3	49.85		Х		
173724-002: comp A-A	49.91	 	TX		
2017277/ 00/11/A	50.11		+^		
20 73776-001: A	50.00	 		MSS	
1737/1/ 6051	49,90	 	X	MISS	
173746-005; comp 1-4A	77.70	 			
10 6-9A		 	X		
15 ¥ 11-14A	50.18	 	 		
	•	Silver		Mfg & Lot # / LIMS # / T	ime Date/Initials
	Sand weighed	out for OC sample			7.31.04 KR
Samples were dried v	with CH2Cl2-rinse	out for QC sample	4 777	\$ A17H50	
1.0 mL of TEH SURR surrog				WC 1409 A	
mL of TEH_SP matrix sp				W51189 F	
\geq 75 mL of 1+1 (CH ₂ Cl ₂ +Aceton	e) was added to a	II CH ₂ Cl	12 EM	44161	
		Aceton	e EN	144085	
Samples were:	3 times place	d on sh ker table a	t: <u>103</u>	0	
	take	n off sh ker table a	t: <u> 773</u>	0	
Extracts filtered thro				A17450	
Co	ncentrated to volu	umes as noted abov	'e	<u> </u>	

xtraction Chemist / Date

Continued on Lage

Reviewed by / Date

Prep Chemist: KR
Cleanup Date: 7.31.64

Benchbook # BK 1952

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		Initial	Final	
Sample #	Batch#	Volume (mL)	Volume (mL)	Comments
MB Q(259708	93369	1.0	1.0	
US 4 9	ł		,	
173686-001				
√ 2				
5 173711-001				
) 2				
J 3				
173724-002				
123746-005				
10 10				
15	→	\downarrow		
		_		
15		<u> </u>		
		 		
		1	mod	
20		/_/^	(2)	
		 		
		1		
25				
	<u> </u>			
		 		
20				
30				

	Mfg & Lot # / Time / Program	Initials / Date
☐ Extracts were cleaned up using C&T assembledg columns	NA	KR 7,31,09
Extracts were cleaned up using 1.0 g c irtridges	893180	
Extracts were eluted with 2.0 m . CH ₂ Cl ₂	EM44161	
Concentrated to volumes as no ed above	· ·	

Fytraction Chamist / Data

Continued from page _____

Reviewed by / Date

Continued From Page

Date

Signed

SAMPLE ID	WEIGHT	AMALYSIS	CommENTS
-3688 - 001A		TEH	M55
[002	50,40		
003	50,10		
904	49,96		
005	50.00		
006	49,91		
007	50,17		
008	49,79		
009	50.32		
010	50.03		
0(1	49,74		
012	50.42		
013	49,95		
1014	50.23		
015 4	50,26		MSS
020	49.81		Comp (016-019)A
625	50.18		[[021-024]]
030	50,45		(026-029)
755, 20035	49,78		(031-034)
755, 30035 Tra 040	50.13		(036-039)
045	49,77		COH1 - 044)
050	50.07	7	046-0497
MB	49.76	TEH	EM43310410
LCS	50.02		Ţ.
MS	50,43		173689-015A
MSD)	50,47	4	#
			1 1 1 1 1 1 1 1 1 1
MB	50,01.	TEH	EM43310410
LLS	49,69		\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \
ms	50,22		173688-00 IA
MSD	50,36		1
		₹	
			Continued on Page
		lead and Understood By	,

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SAMPLE ID	MAIGHT	ANALYSIS CO	parput NTS
173690-0011	50.13	1271	
CO2/	56-11		
003	49.92		
000	50.24		
1 0055	50.28 49.85		MSS
173699-0013	150,28		
173699-0013	49,85		
MB	50.24	- H EM	43510410
ics	150.57		4
MS	50.24 50.39 50.30 50.04		3690-005A
ms D	150.041	4	4
	12914		
	11211		
		**	
	+		
			Continued on Page
	<u> </u>	Read and Understood By	Commuser pir Paya
I had	7/29/04		
Signed		Signed	Date

SAMPLE IS	>	WEIGHT			ANACY	154	Co	nnec	WIT	5
		2013								
173702-6	2214	30.13		+	TEH			· ·		+
	22	49.86					-			
		50.44		-			<u> </u>	MS	5	-
	24	50-14								
	25	49.84								
)26	50.11								
	27	49.90						 _ 		
	28	50.05		_	-					1
		49.82					-			
	30	50-13 49-73								1
									 	
	232	49-81	•					-	-	4-
	933	49.86 .		_						
	53 9	49.85					-			1.
	7354	50.37					7	ウ ユー	03'	14
255	20 036	49.86			4		Col	102 -	A-C	<u> </u>
IR MB		50.01			TEH		CM	47310	24 (6	
(2) C 5		49.79						1		
2.31 MS		50.39					1-7	702	-0	23 3 A
uso		50.11		1)		
		7011								
										1
										1
				~//						1-1-
			1/30							
		-	11							
		2		_						
									1-1	
				_						-
				_			+ +	+ -	+	
				= ===		+	+			
				-	-			Continue	ed on Pa	ge
				Peac	and Unders	tood By		·		<u> </u>
		- 1	a A /	. neat	and onders	loou by				
14/2) ()/04:	<u> </u>	,	Cinned			D.	ate
Signe	ed		Date			Signed			D;	31E

100001				1090 From Page
SAMPLE	40	WEIGHT	ANALYSIS	Comments
173711	1 1 1	30.12	8(00	MSS COUPA-D
	002	30.12		
3	003	29,71		4
MB		29.75		GM43310410
CCS		29.54		4
MS		29,97		173711-001
MSD		30:04	<u> </u>	
73711	- 001	29.75	PCB	COMP(A-D)
	002	30.49		
	003	30.46		
	001	49.81	TEH	
	00 2	49.86		
7	00 3	49.85		
73709		50,16	4	
4	4	29.90	8270	4
		109		
		1124		
		1249/11		
		1		
				Continued on Page
, .			F ∍ad and Understood E	
M_ (+		7/ 2/11		
147			14	
	Signed	Date	Signe	ed Date

DJECT SOIL A	Notebook No. 1969 Continued From Page		
SAMPLE ID	WE 16-147	ALACYSIS	Comments
73724-002	49.91	TEH	Courp (A-H)
73726-0011	50.11		
3 002A	50,06		
3728-00 (A	49.74	A	
3724-002	30.23	8,081	COMP (A-H)
	-		
	/		
			Continued on Page
12		Rea I and Understood	
W	7/30/04	45	
Signed	Date	Sign	ned Date

Sample 10 173726-002:A MS MSD	Weight (g) 50:00 49:75	Analysis	Comments MSS
13776-002:A	56,00	144	MSS
MS	49.75		
MSD	49.74		
			Continued on Page

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Signed

Date

SAMPLE 20	WEIGHT	ANALYSIS	Commedity
173746-005	49.90	TEH	Comp (1-4)A
010	50.30		1 (6-9)A
015	50.18	4	4 (11-14)4
173746-005	30.30	8081	COMP (1-4) A
010	29.88	1 Mss	(6-9)4
1 015	29.87		J (11-14) A
MB	30.21		EM43310420
100	30.02		L
ph s	29,98		(1)
msD	29.94		173746-007 RTS
7000		<u> </u>	
173746-005	30.29	D-7	
1 010		PCB	COMP(1-4)A
	30.00		55 (6-9)A - (1-14)A - (1-14)A
	29.84		4 (1+14)4
MB	29.58		GM43310410
Mi	30.23		
	30.22		173746-010-
MSP	30.03	5	4
		104	
	7 367		
	055		
			Continued on Page
10		Read and Understood By	55,149.6
Wall	7hala.		
Signed	1/00/047	~:	** _ X _
) Joyanou	Data/	Signed	Oate



Pesticides Results & QC Summary

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	Organoc	hlorine Pesticide	es
Lab #:	173746	Lecation:	GA-9 Stockpile Sampling
Client:	Geologica	Piep:	EPA 3550
Project#:	STANDARD	Aralysis:	EPA 8081A
Field ID:	GA9SSCOMP501-504	Batch#:	93406
Lab ID:	173746-005	Sampled:	07/30/04
Matrix:	Soil	R∈ceived:	07/30/04
Units:	ug/Kg	Prepared:	08/02/04
Basis:	dry	Aralyzed:	08/02/04
Diln Fac:	1.000		00/02/04

Moisture:

2%

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	3.3
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	61

Surrogate	%R:	EC Limits	
TCMX	86	39-135	,
Decachlorobiphenyl	86	37-161	



	Organoch	lorine Pesticide	es
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	Prep:	EPA 3550
Project#:	STANDARD	Aralysis:	EPA 8081A
Field ID:	DUP073004COMP501-504	Batch#:	93406
Lab ID:	173746-010	Sampled:	07/30/04
Matrix:	Soil	R∈ceived:	07/30/04
Units:	ug/Kg	Prepared:	08/02/04
Basis:	dry	Aralyzed:	08/02/04
Diln Fac:	1.000		

Moisture:

2%

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	3.4
4,4'-DDE	ND	3.4
Endrin	ND	3.4
Endosulfan II	ND	3.4
Endosulfan sulfate	ND	3.4
4,4'-DDD	ND	3.4
Endrin aldehyde	ND	3.4
4,4'-DDT	ND	3.4
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	61

Surrogate	%RE		
TCMX	79	39-135	,
Decachlorobiphenyl	82	37-161	
			



	Organoc	hlorine Pesticide	es
Lab #:	173746	Le cation:	GA-9 Stockpile Sampling
Client:	Geologica	P:ep:	EPA 3550
Project#:	STANDARD	Aralysis:	EPA 8081A
Field ID:	GA9SSCOMP505-508	Batch#:	93406
Lab ID:	173746-015	Sampled:	07/30/04
Matrix:	Soil	R∈ceived:	07/30/04
Units:	ug/Kg	Prepared:	08/02/04
Basis:	dry	Aralyzed:	08/02/04
Diln Fac:	1.000	aryzea.	00/02/04

Moisture:

3%

Analyte	Result	RL
alpha-BHC	ND	1.8
beta-BHC	ND	1.8
gamma-BHC	ND	1.8
delta-BHC	ND	1.8
Heptachlor	ND	1.8
Aldrin	ND	1.8
Heptachlor epoxide	ND	1.8
Endosulfan I	ND	1.8
Dieldrin	ND	3.4
4,4'-DDE	ND	3.4
Endrin	ND	3.4
Endosulfan II	ND	3.4
Endosulfan sulfate	ND	3.4
4,4'-DDD	ND	3.4
Endrin aldehyde	ND	3.4
4,4'-DDT	ND	3.4
alpha-Chlordane	ND	1.8
gamma-Chlordane	ND	1.8
Methoxychlor	ND	18
Toxaphene	ND	62

Surrogate	%REC		
TCMX	95	39-135	,
Decachlorobiphenyl	97	37-161	



Batch QC Report

	Organ	ochlorine Pesticide	9 8
Lab #:	173746	Le cation:	GA-9 Stockpile Sampling
Client:	Geologica	Prep:	EPA 3550
Project#:	STANDARD	Aralysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC259856	Batch#:	93406
Matrix:	Soil	Prepared:	08/02/04
Units:	ug/Kg	Aralyzed:	08/02/04
Basis:	as received		00/02/04

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	3.3
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ИD	17
Toxaphene	ND	60

Surrogate	%RI	C Limits	
TCMX	96	39-135	,
Decachlorobiphenyl	93	37-161	



Batch QC Report

	(Organochlorine Pesticides	5
Lab #: Client: Project#:	173746 Geologica STANDARD	Lacation: Prep: Aralysis:	GA-9 Stockpile Sampling EPA 3550 EPA 8081A
Type: Lab ID: Matrix: Units: Basis:	LCS QC259857 Soil ug/Kg as received	D: ln Fac: Batch#: Prepared: Aralyzed:	1.000 93406 08/02/04 08/02/04

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	16.66	11.82	71	38-135
Heptachlor	16.66	12.67	· -	
Aldrin	16.66		76	52-142
Dieldrin		12.22	73	49-125
Endrin	16.66	12.66	76	33-138
	16.66	13.54	81	33-164
4,4'-DDT	16.66	13.42	81	30-159

Surrogate	%R	EC Limits	
TCMX	93	39-135	
Decachlorobiphenyl	89	37-161	

Gas Chromatograph #16 ECD
?: Name: Calnum: 234303916001 Instrument: GC16

Date: 29-JUL-2004 01:16 Inj Vol (uL): 1 Reviewed By: RH

Calibration levels:

Standards 29-JUL-2004 01:16 04WS0929 29-JUL-2004 01:47 04WS0928 29-JUL-2004 03:18 04WS0925 29-JUL-2004 02:17 04WS0927 29-JUL-2004 02:48 04WS0926 29-JUL-2004 03:49 04WS0924 04:20 04WS0923 29-JUL-2004 Analyzed Samplenum pest_5 pest_6 pest_7 pest_1 pest_2 pest_3 pest_4 234303916015 234303916016 234303916018 234303916019 234303916020 234303916017 234303916021 Filename Segnum 210_015 210_016 210_017 210_018 210_019 210_020 210_020

Analyte	5	Ch L1 L2	2	71	<u>r</u>	4	<u>,</u>	Tomo V	Ţ			r^2			
аlрhа _с внс	A 8622.5	9267.3 12251	3	14627		14604	14438		8	az mu	units avg	21	MnR~2 MxRSD Flags	Flags	
gamma-BHC	A 9003.6	9580.7	12329	14253	11387	13738	13296	AVRG R	8.375F-5	2 2	110/.1		0.205.20		_
рета-вис	A 7380.4	6643.6	7330.2	7703.7	5956.9	6841.3	6446.7	AVRG R	1.449E-4		7 0009				-
delta-BHC	A 11739	10039	12062	14051	10915	13454	13007	AVRG R	8.210E-5	2	12181	, ;			
Heptachlor	A 11406	11332	13219	14207	11173	12785	11645	AVRG R	8,161E-5	2 2	12253	, t	0.005 20		
Aldrin	A 9610.6	0.9456	11502	12860	10219	12020	11083	AVRG R	9.110E-5	2 8	10977	2 =			
Heptachlor epoxide	A 11433	11026	12592	13320	10510	11660	10054	AVRG R	8.685E-5	2	11513	: 5			
gamma-Chlordane	A 11413	10776	12531	13617	10637	12199	10703	AVRG R	8.550E-5	7 6	11607	2 5			
alpha-Chlordane	A 11165	10691	12519	13388	10426	11866	10320	AVRG R	8,709E-5	2 2	11482	2 5			
4,4'-DDE	A 10901	10574	12244	12995	10001	11194	9364.6	AVRG R	9.059E-5	2 2	11030	· -	0.005 20		
Endosulfan I	A 10932	10532	12240	13180	10198	11680	9991.0	AVRG R	8.889F-5	2 2	11250	- 5			
Dieldrin	A 9991.3	9937.8	11943	12847	9933.8	11036	9213.9	AVRG R	9.345E-5	2 8	10700	2 2			_
Endrin	A 9286.6	8948.5	10600	11323	8635.4	9584.1	7885.2	AVRG R	1.056E-4	2 0	9466.1	: 2			
4,4'-DDD	A 6774.3	6918.2	8559.9	9825.6	6.6572	8740.2	9.997	AVRG R	1.256E-4	2 2	7062 1 14	! 1			
Endosulfan II	A 10305	9918.0	11385	12045	9222.3	10200	8475.5	AVRG R	9.783E-5	2 8	10222	: 2			
4,4'-DDT	A 6266.1	7002.3	8772.6	10321	7599.5	9272.9	8005.7	AVRG R	1.223E-4	2 8	8177.2	: 4	0 005 20		
Endrin aldehyde	A 9840.7	8714.3	9364.8	9765.7	7407.8	8210.8	6905.1	AVRG R	1.163E-4	2 0	8601 3	: Ľ	0 005 20		
Methoxychlor	A 4350.7 4264.0 4283.6 4248.1	4264.0	4283.6	4248.1	3166.1	3371.0	2894.7	AVRG R	2.634E-4	2 0	3706 0 17		0.775 20		
										D.	(10)		02 66.0		_

Flags used: rsd=ICAL %RSD failure

Curves: AVRG: Average response factor

Instrument amount = a0 + response * a1 + response^2 * a2

Page 1 of 2

Gas Chromatograph #16 ECD Type: (normal) Name: Calnum: 234303916001 Instrument: GC16

Reviewed By: RH Date: 29-JUL-2004 01:16 Inj Vol (uL): 1

												F^2		
Analyte	5 2	27	[3	57	15	97	17	Type X	aO a1	a2 units	avg	%RSD №	MnR^2 MxRSD Flags	
Endosulfan sulfate	A 10612	9586.2	10372	10859	8271.9	9107.7	7671.9	AVRG R	1.053E-4	8	l۳	1	0.995 20	
Endrin ketone	A 10243	10404	11813	12613	9512.9	10578	9033.4	AVRG R	9.434E-5	2 8			0.995 20	
TCMX	A 10491	10164	11250	11349	9471.0	10025	9284.3	AVRG R	9.718E-5	2 8	10291		0.995 20	
Decachlorobiphenyl	A 14172	13559	12793	12327	9289.3	9747.7	8658.9	AVRG R	8.691E-5	2 8	11507	19 0		
atpha-BHC	B 24700	25846	32049	35538	28850	34076	33862	AVRG R	3.257E-5	2 8	30703		0.995 20	
gamma-BHC	B 25818	25490	30584	33096	26431	31065	30418	AVRG R	3.450E-5	2 2	28086			_
beta-BHC	B 20421	16747	17296	17137	13274	14681	13824	AVRG R	6.174E-5	2 8	16197		0.005 20	_
del ta-BHC	B 33342	27613	31014	33224	25909	30789	29639	AVRG R	3.309E-5	2 8	30219			
Heptachlor	B 24761	23190	25714	26675	21210	24068	22549	AVRG R	4.163E-5	2 8	74024	. ~		_
Aldrin	B 24065	23569	27688	30000	23809	27560	25586	AVRG R	3.840E-5	2 8	26040			_
Heptachlor epoxide	B 26814	24531	27263	28056	22151	24573	21709	AVRG R	3.998E-5	2 8	25014 1	0		-
gamma-Chlordane	B 28325	25614	28719	30507	23983	27667	24803	AVRG R	3.692E-5	2 8	27088 9			
alpha-Chlordane	B 28151	25713	28807	30273	23614	27075	23950	AVRG R	3.732E-5	2 8	26798			-
4,4'-DDE	B 20854	21077	25363	27937	21420	25123		AVRG R	4.232E-5	2 8	23629 1	<u>-</u>		
Endosuffan I	B 25403	23169	25976	27360	21303	24062	20851	AVRG R	4.164E-5	2 8	24018 1			_
	00103	00477	\$0107	418UY	CLCL7	54549		AVRG R	4.126E-5	2 2	2,5247			_
Endrin	B 20553	19503	22433	23908	18183	20841	17256	AVRG R	4.906E-5	2 2	20383			
4,4'-DDD	B 15386	14984	17651	19697	14928	17778	15341	AVRG R	6.047E-5	2 2	16538 1			
Endosulfan II	B 23422	20921	23097	24187	18502	20847	17213	AVRG R	4.724E-5	2 8	21170 1			
4,4'-DDT	B 12142	12484	15082	17740	13067	16613	14887	AVRG R	6.862E-5	2 8	14574 1			
Endrin aldehyde	B 19947	17236	18239	19118	14438	16359	14282	AVRG R	5.852E-5	2 8	17088	3 0.		
Methoxychlor	B 7046.2	6746.0	7032.2	7597.6	5557.6	6354.6		AVRG R	1.488E-4	2 8	6722 4 1			
Endosulfan sulfate	B 22858	19513	20596	21572	16277	18520	16151	AVRG R	5.167E-5	2 2	10355 1			
Endrin ketone	B 21521	20516	22329	23801	17755	20651	17885	AVRG R	4.846E-5	2 8	20637			
TCMX	B 24097	22334	24005	23945	20004	21393	20337	AVRG R	4.484E-5	2 8	22302 8			-
Decachlorobiphenyl	B 21022	19375	18292	18430	13781	15555	14954	AVRG R	5.766E-5	8	17344 15	_		
														-

25		
SPIL TIMET ROW RAN TIMES IN	20	20
SAL.	13	1
1000	A 22	B 22
	EPA 8081A	EPA 8081A

Flags used: rsd=ICAL %RSD failure

Curves: AVRG: Average response factor Instrument amount = a0 + response * a1 + response^2 * a2 Page 2 of 2

PERFORMANCE EVALUATION REPORT FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Instrument: GC16

Instrument: GC16 Gas Chromatograph #16 ECD Seqnum: 234310564010 Run Name:

Filename: 215_010

Standard(s): 04WS1389

Injected: 02-AUG-2004 16:04

Analyte	Ch	Area
4,4'-DDT 4,4'-DDE 4,4'-DDD	A	76279{ .82 6327.55 26009.26
4,4'-DDT Breakdown %: Breakdown Limit %: 15	4	

Analyte	Oli .	Area
Endrin Endrin aldehyde Endrin ketone	A A	451302.52 12011.25 9158.21
Endrin Breakdown %: Breakdown Limit %: 15	4	

Analyte	Cli	Area
4,4'-DDT		1279145.15
4,4'-DDE 4,4'-DDD		12912.74
מממ- ז ,	В	49386.39
4,4'-DDT Breakdown %: Breakdown Limit %: 15	5	

Analyte		h Area	
Endrin Endrin aldehyde Endrin ketone	B B B	934205 28676.	.09
Endrin Breakdown %: Breakdown Limit %: 15	5		

PERFORMANCE EVALUATION REPORT FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Instrument: GC16

Instrument: GC16 Gas Chromatograph #16 ECD Seqnum: 234310564026 Run Name:

Filename: 215_026

Standard(s): 04WS1389

Injected: 03-AUG-2004 01:34

Analyte 4,4'-DDT 4,4'-DDE 4,4'-DDD	A A	Area 768491.19 5126.51 36249.53
4,4'-DDT Breakdown %: Breakdown Limit %: 15	5	

Analyte	Ch	Area
Endrin Endrin aldehyde Endrin ketone	A A A	462780.77 6943.89 14395.52
Endrin Breakdown %: Breakdown Limit %: 15	4	

Analyte	Cib	Area
4,4'-DDT 4,4'-DDE 4,4'-DDD	B B B	1400835.66 11687.)2 64623.52
4,4'-DDT Breakdown %: Breakdown Limit %: 15	5	

Analyte Endrin Endrin aldehyde Endrin ketone	CI B B B	990664 16875. 37826.	51
Endrin Breakdown %: Breakdown Limit %: 15	5		

CONTINUING CALIBRATION REPORT FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Instid : GC16 Run Name : cc7 IDF : 1.0

Seqnum : 234310564013 Calnum : 234303916001 Injected: 02-AUG-2004 18:58

Standards: 04WS0926

Analyte		Avg							
alpha-BHC				SpkAmt	QuantAmt	Unit	3 % D	Max %D E	'lags
gamma - BHC	A		-		22.61777		13		sd ***
beta-BHC	A	11941		20.00000	22.66680	pg	13	15	
delta-BHC	A	6900.4	7306.7	20.00000	21.17756	рg	6	15	
Heptachlor	A	12181	12979	20.00000	21.31030	рg	7	15	
Aldrin	A	12253		20.00000	21.50569	рg	8	15	
Heptachlor epoxide	A		12052		21.95925	pg	10	15	
gamma-Chlordane	A	11513	12503	20.00000	21.71947	pg	9	15	
alpha-Chlordane	A	11697	12755	20.00000	21.80987	pg	9	15	
4,4'-DDE	A	11482	12544	20.00000	21.84901	pa	9	15	
Endosulfan I	A	11039	12252	40.00000	44.39462	pq	11	15	
	A	11250	12226	20.00000	21.73505	pg	9	15	
Dieldrin	A	10700	11730	40.00000	43.84676	pa	10	15	
Endrin	A	9466.1	10624	40.00000	44.89301	pa	12	15	
4,4'-DDD	A	7962.1	9171.1	40.00000	46.07350	Da E2	15	15	
Endosulfan II	A	10222	11191	40.00000	43.79212	DG DG	9	15	
4,4'-DDT	A	8177.2	9312.5	40.00000	45 55316	pg	14		
Endrin aldehyde	A	8601.3	8027.9	40.00000	37 33347	pg	- 7	15	
Methoxychlor	A	3796.9	3775.5	200.0000	198 8742	pg na		15	
Endosulfan sulfate	A	9497.3	10020	40.00000	42 20262	pg na	-1	15	
Endrin ketone	A	10599	11743	40.00000	44 31644	pg na	6	15	
TCMX	A	10291	10818	40.00000	42 05036	pg n-	11	15	
Decachlorobiphenyl	A	11507	11009	10.00000	20 26010	pg	5	15	
alpha-BHC	В	30703	34622	20.00000	22 5522	pg	-4	15	
gamma-BHC	В	28986		20.00000	21 07607	pg	13	15	
beta-BHC	В	16197	16321	20.00000	21.8/62/	pg	9	15	
delta-BHC	В	30219	30919	20.00000	20.15323	pg	1	15	
Heptachlor	В	24024	24992	20.00000	20.46310	рg	2	15	
Aldrin	В	26040	28944	20.00000	20.80594	pg	4	15	
Heptachlor epoxide	В	25014	26383	20.00000	22.23065	pg	11	15	
gamma-Chlordane	В	27088	28897	20.00000	21.09464	рg	5	15	
alpha-Chlordane	В	26798	28699	20.00000	21.33531	pg	7	15	
4,4'-DDE	В	23629		10.00000	21.41859	pg	7	15	
Endosulfan I	В	24018	26308	10.00000	44.53434	pg	11	15	
Dieldrin	В	24237	25399	20.00000	21.14990	pg	6	15	
Endrin	В		26085	10.00000	43.05028	pg	8	15	
4,4'-DDD	_	20383	22005	10.00000	43.18423	pg	8	15	
Endosulfan II	В	16538	17097	10.00000	41.35255	pg	3	15	
4,4'-DDT	В	21170	23078	10.00000	43.60501	pg	9	15	
Endrin aldehyde	В	14574	15371	.0.0000	42.18978	pg	5	15	
Methoxychlor	В	17088	18006	.0.0000	42.14765	pg	5	15	
Endosulfan sulfate	В	6722.4	6476.3	::00.0000	192.6784	pg	-4	15	
Endrin ketone	В	19355	19975	.0.0000	41.28040	pg	3	15	
rcmx	В	20637	21923	40.0000	42.49385	pg	6	15	
Decachlorobiphenyl	В	22302	25020	⊕0.00000	44.87498	pg	12	15	
	В	17344	17120	⊕0.00000	39.48396	pg	-1	15	
Average EPA 8081A	A		(cou	::t=22)			9	15	
Average EPA 8081A	В		(cou	:.t=22)			6	15	

CONTINUING CALIBRATION REPORT FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Instid : GC16

Seqnum : 234310564027 Calnum : 234303916001

Standards: 04WS1375

Analyte	~ 1.	Avg							
alpha-BHC		RF/CF	RF/CF	2000 CO. C. C. C. C. C. C. C. C. C. C. C. C. C.	QuantAmt	Unit	s %D	Max %D	Flags
gamma - BHC	A	12245		25.00000	25.46078	pg	2		rsd ***
beta-BHC	A	11941	11898	25.00000	24.91026	pg	0	15	
delta-BHC	A	6900.4	6306.8	25.00000	22.84948	рg	-9	15	
Heptachlor	A	12181	11500	25.00000	23.60169	pg	-6	15	
Aldrin	A	12253	11286	25.00000	23.02683	pg	- 8	15	
	A	10977	10766	25.00000	24.51822	pq	-2	15	
Heptachlor epoxide	A	11513	11057	25.00000	24.00858	pq	-4	15	
gamma-Chlordane	A	11697	11297	25.00000	24.14616	pq	-3	15	
alpha-Chlordane	A	11482	11164	25.00000	24.30617	pq	- 3	15	
4,4'-DDE	A	11039	10801	50.00000	48.92336	pq	-2	15	
Endosulfan I	A	11250	10938	25.00000	24.30680	pa	-3	15	
Dieldrin	A	10700	10584	50.00000	49.45717	na	-1	15	
Endrin	A	9466.1	9119.8	50.00000	48.17085	מם בם	-4	15	
4,4'-DDD	A	7962.1	8418.6	50.00000	52.86635	מת בת	6	15	
Endosulfan II	A	10222	9899.2	50.00000	48.42298	בא הא	-3		
4,4'-DDT	A	8177.2	7641.5	50.00000	46.72442	אם הא	- 3 - 7	15	
Endrin aldehyde	A	8601.3	8005.9	50.00000	46.53900	5.A	- / - 7	15	
Methoxychlor	A	3796.9	3251.1	250.0000	214.0637	P 9		15	
Endosulfan sulfate	A	9497.3	8784.6	50 00000	46.24805	pg n~	-14	15	
Endrin ketone	A	10599	10261	50.00000	48.40321	pg	- 8	15	
TCMX	A	10291		50.00000	47.39320	pg	-3	15	
Decachlorobiphenyl	A	11507	9739 1	50.00000	42.32011	рg	-5	15	
alpha-BHC	В	30703	30536	35.00000	42.32011	рg	-15	15	
gamma-BHC	В	28986	28015	15.00000	24.86454	pg	-1	15	
beta-BHC	В	16197	14170	25.00000	24.16296	pg	- 3	15	
delta-BHC	В				21.87125		-13	15	
Heptachlor	В	30219			22.42814		-10	15	
Aldrin	В	24024	21859	15.00000	22.74721	pg	-9	15	
Heptachlor epoxide		26040	25247	45.00000	24.23853	pg	-3	15	
gamma-Chlordane	В	25014	23556	25.00000	23.54277	pg	-6	15	
alpha-Chlordane	В	27088	25586	25.00000	23.61395	pg	-6	15	
4,4'-DDE	В	26798	25133	15.00000	23.44671	pg	-6	15	
Endosulfan I	В	23629	23348	50.00000	49.40459	pg	-1	15	
Dieldrin		24018	22739	∷5.00000	23.66913	pg	-5	15	
Endrin		24237	23032	50.00000	47.51345	pg	-5	15	
4,4'-DDD	В	20383	19522	50.00000	47.88848	pg	-4	15	
		16538	17394	50.00000	52.58831	pg	5	15	
Endosulfan II 4,4'-DDT		21170	20441	90.0000	48.27792	pq	-3	15	
	В	14574	13715	50.0000	47.05502	pq	- 6	15	
Endrin aldehyde		17088	15879	50.00000	46.46127	pa	- 7	15	
Methoxychlor	В	6722.4	5841.2	50.0000	217.2295	pa	-13	15	
Indosulfan sulfate	В	19355	17599	.00000	45.46155	ກα	-9		
Endrin ketone	В	20637		.00000	47.50391	no re	-5 -5	15 15	
CCMX	В	22302		0.00000	46.70858	Da FA	-5 -7	15 15	
Decachlorobiphenyl			14866	0.00000	42.85611	ra ra		15	
Average EPA 8081A	A		(com	:t=22)		ьa	-14	15	
Average EPA 8081A	В			rt=22)			5	15	

rsd=ICAL %RSD failure Page 1 of 1

SEQUENCE SUMMARY FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Sequence: 234303916 Instrument: GC16 Gas Analytical Method: EPA 8081A SOP

Gas Chromatograph #16 ECD SOP Version: 8081_rv7

Begun: 28-JUL-2004

# Filename Type	Samplenum	# Filename Type Samplenum Batch Matrix Analyzed	TOC SPK 11T.	TOC SPK iit. W. W. Stage IIsola	ſ
012 210_012 PEM		004 23:45	1 2 22		>uk
014 210 014 X	hex	29-:TITI-2004 00:46 1 0	1	7	
015 210 015 ICAL	pest 1				
016 210 016 ICAL	pest 2	29-: TITI:-500 TITI:-500 TITI:-00		7	
017 210 017 ICAL	pest 3	0 1 71:10 FOOT TOO 75		8	
	neat 4	0.1 /1:20 #00-Z-000 /Z		4	
	ולם ביילות משמל	29-JUL-ZUU4 UZ:48 1.0		2	
4T0_0T2	pest_5	29-JUL-2004 03:18 1.0		9	
210_020	pest_6	29-JUL-2004 03:49 1.0			
	pest_7	29-JUL-2004 04:20 1.0		α.	
023 210_023 ICV	accu_pest	29-JUL-2004 05:20 1.0	1	6	
024 210 024 X	icv	29-1111,-2004 05-51 1 0			

Stds used: 1=04WS0930 2=04WS0929 3=04WS0928 4=04WS0927 5=04WS0926 6=04WS0925 7=04WS0924 8=04WS0923 9=04WS1240

SEQUENCE SUMMARY FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Sequence: 234310564 Instrument: GC16 Analytical Method: EPA 8081A

Gas Chromatograph #16 ECD SOP Version: 8081_rv7

Begun: 02-AUG-2004

Stds Used ac >ac N 2 4 IOC SPK uL 15 H 0.6649 0.6662 0.6601 0.6693 0.6696 0.6592 0.6638 0.6664 0.6616 0.6585 0.662 0.6714 0.6653 0.6671 1.0 PDF 1.0 1.0 1.0 1.0 1.0 1.0 10.0 1.0 1.0 10.0 1.0 1.0 5.0 4.0 18:58 19:59 20:30 21:00 22:01 21:31 22:32 23:02 23:32 00:02 01:34 02:04 02:35 03:05 04:06 05:07 00:33 05:38 06:39 07:39 04:37 07:09 11:22 18:16 19:28 18:57 19:58 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 02-AUG-2004 03-AUG-2004 Batch Matrix Analyzed Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soi 1 Soil Soil Soil 93347 Soil 93406 93406 93406 93406 93406 93347 93347 93347 93347 93347 93406 93406 93406 93406 173746-010 173727-001 173746-005 173746-015 Samplenum 173719-007 173728-001 173724-002 173762-001 173762-002 173762-003 173727-001 QC259856 QC259625 QC259857 QC259624 pest_4 pest_5 pest_4 pest_5 CCC CCC CCC CCC CCC CC CCV SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE BLANK LCS PEM MSD CG PEM ÇÇ PEM ST ST PEM Filename 215_010 215_011 215_012 215_013 215_015 215_016 215_029
215_031
215_032
215_034
215_034
215_036
215_040
215_051
215_051
215_053
215_053 215_017 215 018 215_019 215 020 215 022 215 023 215_024 215_026 215 021 215_028 120 014 013 910 015 018 020 017 019 021 022 023 024 026 028 029 14 032 031 033 034 980 037 038 040 051

Stds used: 1=04WS1389 2=04WS0926 3=04WS1375 4=04WS1385 Flags used: >=closing ac=average CCV drift out

SEQUENCE SUMMARY FOR 173746 8081 Soil Curtis & Tompkins Laboratories

Instrument: GC16 Sequence: 234310564 Instrur Analytical Method: EPA 8081A

Gas Chromatograph #16 ECD SOP Version: 8081_rv7

Begun: 02-AUG-2004

# Filename Type	Samplenum	Batch Matrix Analyzed	Analyzed	ሻርር	TOC SEK 11.	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	QC259907	93420 Soil	04 21:30		מבני מבני	מרמש סשמם
			04-AUG-2004 02:34 1.0	1.0	r-4	
068 215_068 CCV	pest_4		04-AUG-2004 03:04 1.0	1.0	3	2
069 215 069 X	CCV		04-AUG-2004 03:35 1.0			2

Stds used: 1=04WS1389 2=04WS0926 3=04WS1375 4=04WS1385 Flags used: >=closing ac=average CCV drift out

Curtis & Tompkins Laboratories	Sample Preparation Summary	02-AUG-2004 20:12	
Batch Number : 93406 Date Extracted: 02-AUG-2004 Extracted by : Coral E. Weese Prep Method : 3550	Analysis: 8081 Bgroup: N/A Units: g Clean-up:	Spike #1 ID : 04WS0993B Spike #2 ID : 04WS0840D Spike #3 ID : SOP Version : 8081s rv9	
Sample Type Client			

QC259857 LCS QC259858 MS 5/4 QC259859 MSD 5/4	۵ i	173762-001	(173760-001)	173750-005	173759-003-4	173759-002	173759-001	(1/3/55-002)	X-3/55-001-3	1/3/48-007	173746-015	173746-010	173746-005	173735-003	1/3/35-002	(1/3/35-001)	173724-002	Sample Type	
of 173755-001 of 173755-001																			
	URS Corporation	URS Corporation	Tetra Tech FU			Tetra Tech FW			Tech	East Bay Regional Pa	Geologica	Geologica	Geologica	Tetra Tech FW	Tetra Tech FW	Tetra Tech FW	Innovative Technical	Client	
soil soil soil	Soil	Soil	501L	Soil	Soil	Soil	Soil	Soil	Soil	Park Distric Soil	Soil	Soil	Soil	Soil	Soil	Soil	Technical Solutions Soil	Matrix	
30.21 g 20 30.02 g 20 29.89 g 20 29.62 g 20	30.06 g 20	30.37 9 20	30.38 g 20	29.54 9 20	29.81 9 20	30.04 9 20	9	29.78 9 20	29.62 9 20	29.76 9~ 21		29.88 g 21	30.3 g- 2	29.92 9 2	29.96 g/ 2	29.53 9~ 2	30.23 g ✓ 20	Init Units F W/V V	
0.662032 1 0.666223 1 0.669120 1 0.675219 1	0.665336 1	0.658545 1	0.658328 1	0.677048 1	0 .670916 1	0 0.665779 1		0 0.671592 1	0 0.675219 1	0 0.672043 1	0 0.669568 1	0 0.669344 1	0 0.660066 1	0 0.668449 1	0 0.667557 1	0 0.677277 1		Units Final Prep Clean Vol D.F. D.F.	
.02 0 .02 1 .02 1	.02 0	.02 0	:::02 ≎ 0	.02 0	.02 0	.020	.02 0	.02 0	.02 0	.02 0	.02 0	.02 0	.02 0	.02 0	.02 0	.02 0	0	n pH Sp 1 Sp 2 Sp 3	
8081 8081 8081 8081	8081 8081	8081	8081	8081	8081	8081 8081	8081	8081	8081	8081	8081	8081	8081	8081	8081	8081	8081	3 Analyses	
36208 36208 36208 36208	3620B 3620B	3620B	3620B	3620B	3620B	3620B	3620B		3620B mss	3620B	3620B	3620B	3620B	3620B	3620B	3620B	3620B	Clean Comments Method	ı
	(53																S	

Prep Chemist:__

Relinquished By: UNCL

Reviewed By:

Received By:

(Date: 3/03/04

Curtis & Tompkins, Ltd.		SOIL PEI	EP LOG			BK 1965
LIMS Batch No: 93406				Cleanu	p Method:	Page
LIMS Analysis: 808	EPA 3550	Ob Sonica i	on		EPA 3640a GPC	
Extracted by: (0co.	_ □ EPA 3545	FFE (Mh	#		EPA 3620b Floris	i1
Date Extracted: 8 2 04	□ EPA 3540	oc Soxhle	-			••
7 7				-		-
			Cle	eanup		
Sample # and letter	Sample Wt (g) Final Vol			Comments	
173724-002	30.75	70.r		7 T	Comments	·
173746-005	30.30	1 ~ `		\sim		
-010	29.88	 				
V -05	29.87	+				
5 MBN 2599516	30.21	 -				
100		┼──┼		 		
106	30.02	┼──┾-				
10,60		 				
17777	29.62	 -				
117710C-001	30.37	 -				
10 -002	134.19					
12377 -003	30.06					
173735-001	29.53			149	5 aug 21	174
7007.	29.96					*
003	29.92					
15 173748-007	29.76					
173755-001	29.62			Mce		
1007	29.78			1		
V -003	30.18					
173759-001	29.50					
$\frac{20}{1000}$	30.D4					
-003	29.81					
-004	29 54	-				
1 -000	30.20		-++			
1737100-001	26 22	- \/- -	- 			
1370000	- G-1. []		-			
						
			M	[for Pr T o.+ # / 1	TMC # /TC	
	Sand weighed o	ut for OC san	nnles I IV	1433) D41	_	itials / Date
dried with CH ₂ Cl ₂ -rinsed gra	nular Na₂SO₄	iatomaceous	earth to	MULIPLIE	10	12/124 N
<u>0.02</u> mL of surrog	ate solution was ad	ded to all sin	ples 74i	X19920		
l mL of s	nike solution was :	added to all s	aikaal Di II	US0840	0	
CH_2CI_2 (lot# $EM44101$):Acetone(lot# <i>EM4408</i> 5) was added a	to all			
Sonicated 3 times w/≥100mL □						
	ASE Cell	ulose Filter: 1				
		Soxhlets o				
Extracts filtered through bake	d CH ₂ Cl ₂ rinsed	Soxhlets of	u at:	niniie.		
mores anough bake	Exchange	d 2x with E e	vane	HITH5U JUL1995		
		- LA WILLI. C.	Aane /	とったりょう		
Concentrated: It to volumes as a	noted ahove III to	Clean_um und	יישמוו			
Concentrated: to volumes as a Clean-up (if necessary):	noted above ⊔ to GPC (see GPC ru	n log \ [7] 1.1.	ume V	· · · · · · · · · · · · · · · · · · ·		+

Extraction Chemist / Date

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Continued from pag : _____

Reviewed by / Date

Florisil Cleanup

EPA 3620B

Benchbook # BK 1851

Page 77

Samula #	Extraction	Initial Values (v. I.)	Final	
Sample #	Batch#	Volume (n L)	Volume (mL)	Comments
173767-001	93406	1.0	1.0	
-002				
V -003				
173746-005				
5 010	<u> </u>			
V -015				
173724-002	\			
173735-001				
-002				
10 000				
173755-001				MCG
-007				
V -003				
173748-007				
15 173759-001				
5007			,	
-003				
-004				
1 7005				
20 173760-001				,
MA WC 259856				
Ue, 1 7				
MS 8				1
méso v 9				
25				
		(0,5)		
		0/2/1	14	
			,	
30				

	Mfg & Lot # / Time / Program	Initials / Date
☐ Extracts were cleaned up using Florisil cartridges	Nespre 0 204125-AD	(DUS/2/14
Florisil cartridges/ columns rinsed 3x with Hexane	ETCK899	
Extracts were eluted with $\frac{\mathscr{G} \cdot \mathscr{O}}{\mathbb{I}}$ mL 9:1 Hexane/Acetone Hexane		
Acetone		
Concentrated to volumes as noted above		

Extraction Chemist / Date

Continued from page : _____

Reviewed by / Date

			Continued From Page		
SAMPLE ID	WEIGHT	ANACY SIS	Comments		
173724-002	30.25	COC 1	Comp (A-H)		
→ → → → → → → → → → → → → → → → → → →	30.01	8081 PCB	comp (A-H)		
73727-00 IA	29.98	8081	i Y .		
t +	30.31	PCB			
73728-001A	30.08	3081			
<u> </u>	29.94	PC B			
<u></u>	300	4/			
	120				
	(-)				
<u></u>					
<u></u>					
<u> </u>					
			Tearmine's on Page		
A second		Had also Pricercy oc. 3			

SAMPLE ID	wa6HTG)	ANALYSIS	COMMENTS	
173735-001A	29.53	808		
	29.96	1		
-002 -0034	29.92			
173748-0074	29.76			
17355 -00 1 A	29.42		MSS	
1 -002 1	29.78			
9 -0039	30-19			
173759-001A	29.54			
1 +002	30-04			
-003	29.81			
1-004	29-54			
7 -005	36.38			
173760 - 0014	29.77			
173762-001	30-37		COMP 4 CORES A >D	
1 +002	29.79			
1 -003	30.06		\$	
MS	29.89		173755 -001A	
MSD	29-62			
				, , , , , , , , , , , , , , , , , , , ,
	1			
		m 8/2/04		
		IN OI		
				Sentinued on Page
			Read and Understood By	
		68	•	
XXX	MC	8/2/04 68		
() dignic ()		Date	Signed	Date

Natebook No. 192 72 PROJECT Solo As a COT Continued From Page _____ SAMPLE 10 TAH Gorde [1 -4]A (16-9)A 50.36 010 111+14)4 150.18 30130 2081 COMP 11-47/A 1737HG - 005 (6-5) d MES OIO 29.88 (N-/Y)/A 2987 GM43310000 MB 30.121 109 3002 29,98 MID COMP (1+4) PCB 17744 Ldos 30.29 MSS (6-0)A 010 29.84 MB LdS phs MISH 113407 Continued on Page Read and Understood By

Circon

Date



PCBs Results & QC Summary



Polychlorinated Biphenyls (PCBs) Lab #: 173746 Lo:ation: GA-9 Stockpile Sampling Client: Geologica Prep: EPA 3550 Project#: STANDARD An llysis: EPA 8082 Matrix: Soil Sampled: 07/30/04 Units: ug/Kg Re:eived: 07/30/04 Diln Fac: 1.000 08/02/04 Prepared: Batch#: 93396 An llyzed: 08/02/04

Field ID:

Type:

Lab ID:

GA9SSCOMP501-504

SAMPLE

173746-005

Ba∷is:

Mo sture:

dry

2%

Cleanup Method: EPA 3665A

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits	
TCMX	120	63-140	
Decachlorobiphenyl	110	46-151	

Field ID:

Type:

Lab ID:

DUP073004COMP501-504

SAMPLE

173746-010

Ba:is:

dry

Mo: sture: 2%

Cleanup Method: EPA 3665A

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits	
TCMX	110	63-140	
Decachlorobiphenyl	94	46-151	

ND= Not Detected RL= Reporting Limit Page 1 of 2



		Polychlorinated Bi	phenyls	(PCBs)
Lab #:	173746	Lo	ation:	GA-9 Stockpile Sampling
Client:	Geologica	Pre	p:	EPA 3550
Project#:	STANDARD	Ana	lysis:	EPA 8082
Matrix:	Soil	Sat	pled:	07/30/04
Units:	ug/Kg	Rec	eived:	07/30/04
Diln Fac:	1.000	Pre	pared:	08/02/04
Batch#:	93396	Ana	lyzed:	08/02/04

Field ID: Туре:

Lab ID:

GA9SSCOMP505-508

SAMPLE

173746-015

Ba: is:

Mo: sture:

dry

3%

Cleanup Method: EPA 3665A

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	25	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits	
TCMX	104	63-140	
Decachlorobiphenyl	94	46-151	

Type: Lab ID:

BLANK

Ba:is:

as received

QC259814

Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits	
TCMX	117	63-140	
Decachlorobiphenyl	113	46-151	

ND= Not Detected RL= Reporting Limit Page 2 of 2



Batch QC Report

	Polychlorinated	Bí	phenyls (PCI	is)
Lab #:	173746	Lo	ation:	GA-9 Stockpile Sampling
Client:	Geologica	Pr∈	p:	EPA 3550
Project#:	STANDARD	Ana	lysis:	EPA 8082
Type:	LCS	Di.	n Fac:	1.000
Lab ID:	QC259815	Bat	ch#:	93396
Matrix:	Soil	Pre	pared:	08/02/04
Units:	ug/Kg	Ana	lyzed:	08/02/04
Basis:	as received		•	, , : :

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	' Limits
Aroclor-1016	165.4	134.9	82	80-129
Aroclor-1260	165.4	142.7	86	80-131

TCMX 103 63-140 Decachlorobiphenyl 93 46-151	Surrogate	%REC	Limits	
Decachlorobiphenyl 93 46-151	TCMX	103	63-140	
	Decachlorobiphenyl	93	46-151	



Batch QC Report

	Polychlorinated	l Biphenyls (PC	'Bs)
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Field ID:	DUP073004COMP501-504	Ba:ch#:	93396
MSS Lab ID:	173746-010	Sampled:	07/30/04
Matrix:	Soil	Received:	07/30/04
Units:	ug/Kg	Prepared:	08/02/04
Basis:	dry	Analyzed:	08/04/04
Diln Fac:	1.000		

Type:

MS

Lab ID:

QC259816

Moisture: 2%

Cleanup Method: EPA 3665A

Analyte	MSS Result	Spiked	Result	%RE	C Limits
Aroclor-1016	<2.245	168.8	158.1	94	65-155
Aroclor-1260	<1.735	168.8	168.2	100	63-127

Surrogate		Limits	
TCMX	120	63-140	
Decachlorobiphenyl	98	46-151	

Type:

MSD

Lab ID:

QC259817

Moisture:

2%

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	! Limits	RPD	Lim
Aroclor-1016	169.9	162.3	96	65-155	2	27
Aroclor-1260	169.9	166.1	98	63-127	2	34

Surrogate	%REC	Limits	
TCMX	121	63-140	
Decachlorobiphenyl	96	46-151	

Instrument: GC06

Reviewed By: CW Date: 02-AUG-2004 21:40 Inj Vol (uL): 1 Gas Chromatograph #6 ECD
Procedure Type: (normal)

Name: Calnum: 204310220001

Calibration levels:

Standards	04WS0970	04WS0960	04WS0961	04WS0962	04NS0963	04WS0964	04WS0967
	21:40	22:13	22:46	23:19	23:52	00:25	00:59
Analyzed	02-AUG-2004 21:40 04WS0970	02-AUG-2004 22:13 04WS0960	02-AUG-2004 22:46 04WS0961	02-AUG-2004 23:19 04WS0962	02-AUG-2004 23:52 04WS0963	03-AUG-2004 00:25 04WS0964	03-AUG-2004 00:59 04WS0967
Samplenum	pcb10_2	pcb25_5	pcb100_20	pcb250_50	pcb500_100	pcb750_150	pcb1K_200
Segnum	204310220013 pcb10_2	204310220014 pcb25_5	204310220015 pcb100_20	204310220016 pcb250_50	204310220017	204310220018	204310220019
Filename	215_013	215_014	215_015	215_016	215_017	215_018	215_019
#	Н	7	m	4	Ŋ	9	7

2 = 2	1 L	2	ch 11 12 L3 14 L5	31	97	1.7	Type X	a0 a1	a2 u	units avg	r^2 XRSD Mi	MnR^2 MxRSD Flags	Flags	
2	.19 249	.72 232.	92 240.	A 222.19 249.72 232.92 240.39 205.76	174.68	193.06	AVRG R	0,004609	Бd	g 216.96 12		.99 20		
	.53 501	.92 460.	15 463.2	A 562.53 501.92 460.15 463.25 377.78	318.34	349.18	AVRG R	0.002308	₽ Bd	433.31	20	.99 20		
יוסו ביים ביים ביים אים ביים ביים ביים ביים	110 61:	יבטר טבי	א ייטיייז אייייי א ייטיי א	טליסנים ט	201.00	410.40	AVKU K	CC1 200.0	<u>8</u>	CI 1C.004 B	·	,yy cu		
Aroclor-1016 Peak # 4 A 311.	A 311.49 350.77 348.34	.77 348.	34 364.70	70 297.87	262.44	298.62	AVRG R	0.003133	6d	319.17	11 .5	02 66		
Aroclor-1016 Peak # 5 A 272.	A 272.20 286.48 281.40	.48 281.	40 288.62	2 237.23	198.13	226.63	AVRG R	0.003909	Бd	9 255.81 14	Ī	02 66		
Aroclor-1260 Peak # 1 A 534.49		557.25 558.61	61 543.99	9 422.20	344.29	396.21	AVRG R	0.002085	84	g 479.58 19		02 66		
Aroclor-1260 Peak # 2 A 904.	.42 888.	.70 849.	A 904.42 888.70 849.86 860.45 672.0	5 672.00	546.32	638.04	AVRG R	0.001306	BG.	1 765.68 19	i	02 66		
Aroclor-1260 Peak # 3 A 480.31		419.58 458.34	34 454.57	7 367.56	297.31	349.09	AVRG R	0.002476	Ed.	g 403.82 17	·	02 66		
Aroclor-1260 Peak # 4 A 363.33		365.28 397.28	28 433.25	5 344.26	284.33	341.69	AVRG R	0.002767	Bd	361.35 13	·	.99 20		
Aroclor-1260 Peak # 5 A 868.22		928.30 936.04	04 985.95	5 789.30	648.83	768.31	AVRG R	0.001181	6d.	9 846.42 14	Ī	.99 20		
TCMX A 9152	A 9152.2 9977.5	.5 9263.6	.6 9902.	9902.9 8412.0	7286.0	8156.7	AVRG R	1.126E-4	Bd	1 8878.7 11	Ī	02 50		
Decachlorobiphenyl A 10877	77 10709	9 9872.1	.1 12832	7437.8			AVRG R	9.66E-5	<u>8</u>	10346	19 .9	02 50		
Aroclor-1016 Peak # 1 B 242.83	.83 242.17	17 239.76	76 258.59	9 221.85	183.59	206.89	AVRG R	0.004387	8	1 227.95 11		02 66		
Aroclor-1016 Peak # 2 B 301.	B 301.07 317.39 329.13	39 329.	13 342.65	5 279.81	238.92	270.55	AVRG R	0.003366	5d	1 297.07 12	•	22 66		
Aroclor-1016 Peak # 3 B 1225	B 1225.7 1232.9 1179.3	9 1179	.3 1198.	1198.8 944.96	806.07	890.17	AVRG R	9.361E-4	Bd	1 1068.3 17	•	02 66		
Aroclor-1016 Peak # 4 B 465.	B 465.77 502.61 466.00	61 466.	00 483.84	4 385.83	333.37	369.79	AVRG R	0.002328	đ	1 429.60 15	Ī	02 66		
Aroclor-1016 Peak # 5 8 322.	8 322.46 326.55	55 314.99	99 326.70	0 268.97	229.90	262.36	AVRG R	0.003411	Bd	1 293.13 13	·	02 50		
	.92 843.	20 864.	B 804.92 843.20 864.53 921.86 729.59	6 729.59	623.19	723.59	AVRG R	0.001270	5d	787.27 13	·	99 20		
Aroclor-1260 Peak # 2 B 1254	4.5 1305	.5 1297	B 1254.5 1305.5 1297.8 1345.0 1066.2	0 1066.2	886.63	1041.3	AVRG R	8.540E-4	bd	1171.0 15	5 .99	9 20		

AVRG: Average response factor Curves:

Instrument amount = a0 + response * a1 + response^2 * a2 Page 1 of 2

Instrument: GC06 Gas Chromatograph #6 ECD Calnum: 204310220001 Name: Type

Reviewed By: CW Date: 02-AUG-2004 21:40 Inj Vol (uL): 1 Type: (normal)

Analyte	ch t1 t2 t3 t4 t5	L2	13	57	15	91	77	L6 L7 Type X a0	a0	a Ta	a2	<u>5</u> 53	r^2 a2 units avg %RSD MnR^2 MxRSD Flags	r^2 %RSD /	(nR^2 ≯	(xRSD F	lags	
Aroclor-1260 Peak # 3	B 836.14	836.14 872.35 845.26 901.05 740.38 622.22 753.05 AVRG R	845.26	901.05	740.38	622.22	753.05	AVRG R		0.001257		82	795.78 12	12	8	Q.		
Aroclor-1260 Peak # 4	B 708.28 658.49 677.16 709.83 592.01	658.46	677.16	709.83	592.01	499.26 605.88	605.88	AVRG R		0.001573		bd	635.85 12	12	6	o:		
Aroclor-1260 Peak # 5	B 1689.9	1689.9 1627.7 1611.2 1813.1 1468.9	1611.2	1813.1	1468.9	1232.9 1501.8 AVRG	1501.8	AVRG R		6.395E-4		<u>6</u>	1563.6 12	12	66	Q.		
TCMX	B 10333	10333 11533 11102 11785 9884.1	11102	11785	9884.1	8500.3 9395.7	9395.7	AVRG R		9.651E-5		<u>p</u>	10362	12	8	2		
Decach lorobiphenyl	B 12402 11918 11586 15972 9357.	11918	11586	15972	9357.4			AVRG R		8.165E-5		Бd	12247 19	. 61	8	0.		

Instrument amount = a0 + response * a1 + response^2 * a2

of 2

Page 2

AVRG: Average response factor

Curves:

Instrument: GC22

Reviewed By: MCH Date: 29-JUL-2004 18:14 Inj Vol (uL): 1 Gas Chromatograph #22 ECD Type: (normal) Name: Calnum: 254304934001

Calibration levels:

Standards	04WS0970	04WS0960	04WS0961	04WS0962	04WS0963	04WS0967	04WS0964
	18:14	18:42	19:10	19:39	20:07	21:04	12:51
Analyzed	29-JUL-2004 18:14 04WS0970	29-JUL-2004 18:42 04WS0960	29-JUL-2004 19:10 04WS0961	29-JUL-2004 19:39 04WS0962	29-JUL-2004 20:07 04WS0963	29-JUL-2004 21:04 04WS0967	30-JUL-2004 12:51 04WS0964
Samplenum	pcb10_2	pcb25_5	pcb100_20	pcb250_50	pcb500_100	pcb1K200	pcb750_150
Filename Segnum Samplenum	211_005 254304934005 pcb10_2	254304934006 pcb25_5	254304934007	254304934008	254304934009	254304934011	254304934017
Filename	211_005	211_006	211_007	211_008	211_009	211_011	211_017
#	-	7	m	4	ιΩ	9	7

Analyte	ch t1 L2 L3 L4 L5	1.2	n	ני	1.5	79	71	Type X a0) af	a2 uni	units avg 私	r^2 %RSD Mni	MnR^2 MxRSD Flags	
Aroclog-1016 Peak # 1	A 292.55 278.51 295.02 282.27 308.69	278.51	295.02	282.27	_	314.52	285.01	AVRG R	0.003404	60	293.80 5	66.	50	
Arocloi-1016 Peak # 2	A 742.30 717.64 681.30 654.37 668.93	717.64	681.30	654.37		670.47	96.549	AVRG R	0.001464	82	683.00 5	8.	02 0	
Aroctor-Iulo Peak # 5	A 8UZ.30	840.U4		54.5¢ 10.088 20.4¢8	732.48	1036.6 \$	76.67	AVKG K	/ 01100.0	Ø.	9U5.19 9	3.	. 50	
Aroctor-1016 Peak # 4	A 507.72 577.66 478.79	577.66	478.79	535.03	494.51	512.04 5	557.55	AVRG R	0.001911	B	523.33 7	%.	. 20	
Aroclor-1016 Peak # 5	A 396.32 378.18	378.18	378.71	363.16 388.57	388.57	402.87 3	385.21	AVRG R	0.002599	BC.	384.72 3	6.	. 20	
Aroclor-1260 Peak # 1	A 854.50 782.64 729.07 662.20 690.45	782.64	729.07	662.20		804.28 6	681.77	AVRG R	0.001345	ā	743.56 10	6.	. 20	
Aroclor-1260 Peak # 2	A 1139.6	1043.2	1001.8	762.97	1028.7	1310.5 1	1063.5	AVRG R	9.267E-4	8	1079.1 1	8.	. 20	
Aroctor-1260 Peak # 3	A 628.17	25, 47	556.15 529.26	529.26	538.94	599.39 5	512.53	AVRG R	0.001768	82	565.56 8	8.	50	
Aroclor-1260 Peak # 4	A 676.75	602.87	549.15	535.51	554.39	637.28 5	532.00	AVRG R	0.001712	82	583.99 10	%.	20	
Aroclor-1260 Peak # 5	A 1670.8 1540.7	1540.7		1301.9 1284.4	1370.1	2009.9 1	1508.0	AVRG R	6.551E-4	8	1526.5 17	%.	20	
TCMX	A 22280	21913	20983	23299	33010 2	26979 3	30374	AVRG R	3.914E-5	82	25548 18	8.	50	
Decachlorobiphenyl	A 12975	11006	10154	15423	14252 '	13112 1	14114 /	AVRG R	7.689E-5	8	13005 14	6.	20	
Aroclor-1016 Peak # 1	В 326.92	317.09	297.49	333.56	298.51	356.84 2	291.81	AVRG R	0.003150	<u>B</u>	317.46 7	8.	20	
Aroclor-1016 Peak # 2	B 506.88 467.84 435.73	467.84	435.73	476.74	454.95	483.29 3	375.81	AVRG R	0.002207	82	453.03 10	6.	20	
Aroclor-1016 Peak # 3	B 557.30	511.14	487.77 582.71		505.09	99.60	431.23	AVRG R	0.001905	8	524.98 11	8.	20	
Aroclor-1016 Peak # 4	B 386.58	371.88	343.44	369.05	330.61 3	396.78 2	281.10 /	AVRG R	0.002823	8	354.20 11	%	20	
Aroclor-1016 Peak # 5	B 433.35	396.33	380.59 433.07		390.73 4	475.23 3	326.48	AVRG R	0.002468	ğ	405.11 12	8.	20	
Aroclor-1260 Peak # 1	B 606.30 600.88 602.06 658.09	88.009	602.06	628.09	583.01 7	785.77 4	471.36	AVRG R	0.001625	8	615.35 15	6.	20	
Aroclor-1260 Peak # 2	B 494.62 500.02 546.54 618.16 573.50	500.02	546.54	618.16	73.50	4	61.84	AVRG R	0.001878	<u>6</u> d	532.45 11	%	20	

AVRG: Average response factor Curves:

Instrument amount = a0 + response * a1 + response^2 * a2

Page 1 of 2

Type: (normal) Gas Chromatograph #22 ECD Name: Calnum: 254304934001 Instrument: GC22

Date: 29-JUL-2004 18:14 Inj Vol (uL): 1

Reviewed By: MCH

%RSD MnR^2 MxRSD Flags 2 2 2 8. 8. 8 7,2 394.94 19 391.42 19 1112.1 18 units avg 5 5 5 5 5 **a**2 0.002555 8.992E-4 0.002532 ä a0 AVRG R AVRG R Type X AVRG R 309.58 794.36 319.29 b 1461.0 519.62 509.07 1044.6 406.08 396.73 448.53 1197.2 455.97 416.62 407.23 1195.7 2 1050.7 339.17 333.74 B 1040.8 B 325.69 B 317.25 <u>១</u> Aroclor-1260 Peak # 3 Aroclor-1260 Peak # 4 Aroclor-1260 Peak # 5 Analyte

2 2

8

8

4.316E-5

AVRG R

24423 11075

26346

23887 11384

20500 10002

B 22344

AVRG R

6457.5 25869

7717.8

8807.3 18808

B 9846.5

Decach Lorobiphenyl

Z.

1.072E-4

Instrument amount = a0 + response * a1 + response^2 * a2 AVRG: Average response factor Curves:

o£

Page 2

CONTINUING CALIBRATION SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Analyte: Aroclor-1016

Instid	Ch	Segnum	Injected	Calnum	Caldate	AVg RF/CF RF/CF	SpkAmt	QntAmt	Units	%D	Max %D Flags	
GC06	Α	204311979025	04-AUG-2004 03:25	204310220001	02-AUG-2004			483.77	Transfer of the second		15	0.0000000000000000000000000000000000000
GC06	В	204311979025	04-AUG-2004 03:25	204310220001	02-AUG-2004			472.91	• -	_	15	
GC06	Α	204311979043	04-AUG-2004 13:46	204310220001	02-AUG-2004			222.68	• -	-11	•	
GC06	В	204311979043	04-AUG-2004 13:46	204310220001	02-AUG-2004			212.63	• -	- 15		
GC22	A	254310347010	02-AUG-2004 16:37	254304934001	29-JUL-2004			438.73	• -	-12		
GC22	В	254310347010	02-AUG-2004 16:37	254304934001	29-JUL-20(4			539.28	• -		15	
GC22	Α	254310347026	03-AUG-2004 00:49	254304934001	29-JUL-20(4			217.67	• -	-13		
GC22	В	254310347026	03-AUG-2004 00:49	254304934001				253.36	• -	-	15	

CONTINUING CALIBRATION SUMMARY FOR 173746 PCB Soil Curtis & Tompkin: Laboratories

Analyte: Aroclor-1260

						Avg				
Instid	Ch	Segnum	Injected	Calnum	Caldate	RF/CF RF/CI	SpkAmt	QntAmt	Units %D	Max %D Flags
GC06	A	204311979025	04-AUG-2004 0	3:25 204310220001	02-AUG-2004			488.90		15
GC06	В	204311979025	04-AUG-2004 0	3:25 204310220001	02-AUG-2004			488.95	• -	15
GC06	A	204311979043	04-AUG-2004 1	3:46 204310220001	02-AUG-2004			220.19	• -	
GC06	В	204311979043	04-AUG-2004 1	3:46 204310220001	02-AUG-2004			214.38		
GC22	Α	254310347010	02-AUG-2004 1	6:37 254304934001	29-JUL-2004			430.07		
GC22	В	254310347010	02-AUG-2004 1	6:37 254304934001	29-JUL-2004			564.14	. •	
GC22	Α	254310347026	03-AUG-2004 0	0:49 254304934001	29-JUL-2004			215.24		
GC22				0:49 254304934001	29-JUL-2004			287.17	• =	15

CONTINUING CALIBRATION SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Analyte: TCMX

Instid	Ch	Seqnum	Injected	Calnum	Caldate	Avg RF/CF	RF/CF	Saktas	04					
GC06	Α	204311979025	04-AUG-2004 03:	25 204310220001				SPRAIRE	UNICAME	Units		Max %D	Flag	S
GC06						00/8./	8986.2	100.00	101.21	pg	1	15		
				25 204310220001	02-AUG-2(1)4	10362	10246	100.00	98.877	pa	- 1	15		
GC06	Α	204311979043	04-AUG-2004 13:	:46 204310220001	02-AUG-20134	8878 7	8080 Z	50 000	/E EO/		-			
GC06	В	204311979043	04-AUG-2004 13:		02-4110-2017	407/2	0750.5	50.000	45.504	pg	-9			
					02-AUG-2(1)4	10362	9352.5	50.000	45.129	pg	-10	15		6
				37 254304934001	29-JUL-20)4	25548	29034	100.00	113 64	na .	14	15		 1
GC22	В	254310347010	02-AUG-2004 16:		29-JUL-20)4									Wel
GC22	Α	254310347026	03-AUG-2004 00-								29	15	C+	in hove
GC22	n	25/3403/7020	05 AUG-2004 00:	47 434304934001	29-JUL-20)4	25548	21213	50.000	41.515	pg	-17	15	c- '	- > f
4622	В	254510347026	03-AUG-2004 00:	49 254304934001	29-JUL-20)4	23168	22263	50 000	48 047	na	-4		-	timit

Caboratory Limits:

⁺⁼high bias -=low bias c=CCV Page 1 of 1

CONTINUING CALIBRATION SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Analyte: Decachlorobiphenyl

Instid	Ch	Segnum	*_::_:.			Avg							
			Injected	Calnum	Caldate	RF/CF	RF/CF	SpkAmt	QntAmt	Units	%n	Max %D	Flage
GC06	Α	204311979025	04-AUG-2004 03:2	204310220001	02-AUG-20 14	10346	8106 /	100 00	70 7F/				
GC06	В		04-AUG-2004 03:25		02 1102 2014	10340	0100.4	100.00	10.330	pg	-22	15	c-
					02-AUG-20-14	12247	9828.3	100.00	80.250	pg	-20	15	c-
	А	204311979043	04-AUG-2004 13:46	204310220001	02-AUG-20 14	10346	10432	50.000	50 416	na	1	15	-
GC06	В	204311979043	04-AUG-2004 13:46		02-AUG-2014								
GC22	Δ							50.000	49.989	pg	0	15	
			02-AUG-2004 16:37		29-JUL-2014	13005	12291	100.00	94.510	pa	-5	15	
GC22	В	254310347010	02-AUG-2004 16:37	254304934001	29-JUL-2014	0327 1							4
GC22	Α		03-AUG-2004 00:49								-17	15	c- My
GC22			05 AUG-2004 00:45	224304934001	29-JUL-2014	13005	15554	50.000	59.801	pg	20		C+ TO WORL
4622	В	254510347026	03-AUG-2004 00:49	254304934001	29-JUL-2014	9327.1	10658	50 000	57 133	na .	14		- m vi ainit

Luboratory Lin: k: 46-1512 or Hulu

⁺⁼high bias -=low bias c=CCV Page 1 of 1

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Instrument: GC22 Analytical Method: EPA 8082 Sequence: 254304934

ECD Gas Chromatograph #22
SOP Version: PCB_rv3

Begun: 29-JUL-2004

Ž, VL pH Stds Used Ŋ ဖ 7 4 ω α σ IOC SPK uL \vdash 29-JUL-2004 17:45 1.0 29-JUL-2004 18:14 1.0 29-JUL-2004 18:42 1.0 29-JUL-2004 19:10 1.0 20:07 1.0 29-JUL-2004 21:04 1.0 29-JUL-2004 21:32 1.0 30-JUL-2004 12:51 1.0 30-JUL-2004 14:44 1.0 30-JUL-2004 13:48 1.0 30-JUL-2004 14:16 1.0 29-JUL-2004 19:39 20:35 29-JUL-2004 29-JUL-2004 Batch Matrix Analyzed pcb250_50 pcb500_100 pcb750 150 pcb750_150 Samplenum pcb100_20 accu_1660 pcb1K200 pcb10_2 pcb25_5 hexane CC CCC ICAL ICAL ICAL ICAL ICAL ICAL ICAL Filename Type IG 004 211_004 005 211_005 006 211_006 007 211_007 008 211_008 009 211_009 019 211_019 020 020 211_020 021 211_021 211_011 211_012 211_017 017 011 012 #

30-JUL-2004 15:13 1

Stds used: 1=04WS0970 2=04WS0960 3=04WS0961 4=04WS0962 5=04WS0963 6=04WS0964 7=04WS0967 8=04WS1303 9=04WS1423

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Instrument: GC06 Sequence: 204310220 Instru Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

Begun: 02-AUG-2004

# Filename Type	Samplenum	Batch Matrix Analyzed TDF	TOC SDK 11T.	TOO SDK ii. VI of de 1720
002 215_002 X	CCV	004 10:20	TD 0.72	אים אים ספכם ספכם אים ליו
003 215_003 CCV	pcb250_50	02-AUG-2004 10:53 1.0	•	
	hex		1	4
	pcb10_2			
	pcb25_5	02-AUG-2004 22:13 1.0		3
215_015	pcb100_20	02-AUG-2004 22:46 1.0		4
016 215_016 ICAL	pcb250_50	02-AUG-2004 23:19 1.0		
215_017	pcb500_100	02-AUG-2004 23:52 1.0		
018 215_018 ICAL	pcb750_150	03-AUG-2004 00:25 1.0		
215_019	pcb1K_200	03-AUG-2004 00:59 1.0		7
021 215_021 ICV	accu_1660	03-AUG-2004 02:05 1.0	1	α
022 215_022 X	icv	03-AUG-2004 02:38 1.0	I	0
023 215_023 X	icv	03-AUG-2004 03:11 1.0		6
026 215 026 ICAL	pcb250_50	03-AUG-2004 12:25 1.0		
4				

Stds used: 1=04WS0962 2=04WS0970 3=04WS0960 4=04WS0961 5=04WS0963 6=04WS0964 7=04WS0967 8=04WS1303 9=04WS1423

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Sequence: 254310347 Instrument: GC22 Gas Ch Analytical Method: EPA 8082

Gas Chromatograph #22 ECD SOP Version: PCB_rv3

Begun: 02-AUG-2004

,	אחר																													
Q+ An 1700A	1	-	SDK				2	2	<u>c</u>	<u> </u>						spk	Spk	Spk	ank	Sok	1	-	m	3	sok	SOK	ACE.	sok	spk	spk
TOC SPK 11T.	1		1 4 1	1	1 1 1	!	-	l .	-	· н	F	2 1	-		l r ·	3	Н	1	2 1		·			-	· -+	2				
PDF	1.0		0.8389	.847	0.8331		1.0		1.0	1.0	0.8452	. 82	0.8254			0.8381	0.8232	•	0.8237	.83	1.0			1.0		0.8273				0.8243
: Analyzed IDF	02-AUG-2004 12:27 1.0	02-AUG-2004 12:56 1.0	G-2004 14:05 1.	02-AUG-2004 14:40 1.0	02-AUG-2004 15:10 1.0	02-AUG-2004 16:09 1.0	02-AUG-2004 16:37 1.0	3-2004 17:	02-AUG-2004 18:12 1.0	02-AUG-2004 18:41 1.0	02-AUG-2004 19:37 1.0	Н	02-AUG-2004 20:34 1.0	-AUG-2004 21:02 1	-	02-AUG-2004 21:59 1.0	02-AUG-2004 22:27 1.0	02-AUG-2004 22:56 1.0	02-AUG-2004 23:24 1.0	2004 23:52 1.	004 00:49 1.	03-AUG-2004 01:17 1.0		03-AUG-2004 02:14 1.0	03-AUG-2004 03:10 1.0	03-AUG-2004 03:39 1.0	03-AUG-2004 04:07 1.0	04:35 1.	_!_	03-AUG-2004 05:32 1.0
Batch Matrix Analyzed			93318 Soil	93346 Soil		93318 Soil					93396 Soil	93396 Soil	93396 Soil	93396 Soil	93396 Soil	93318 Soil	93318 Soil	93318 Soil	93318 Soil	93318 Soil					93318 Soil	93318 Soil	93318 Soil	93318 Soil	93318 Soil	93318 Soil
Samplenum	pcb250_50	CCV	QC259510	QC259619	173741-001	QC259510	pcb500_100	ccv	CCV	ar1254	QC259814	QC259815	173746-005	173746-010	173746-015	173688-001	173688-002	173688-003	173688-004	173688-005	pcb250_50	CCV	ccv	ar1254	173688-006	173688-007	173688-008	173688-009	173688-010	173688-011
ame Type)2 CCV	3 X)5 LCS	90 ICS	7 SAMPLE		.0 CCV	х	×	3 CCV	5 BLANK	e Ircs		8 MSS	9 SAMPLE		1 SAMPLE	2 SAMPLE	3 SAMPLE	4 SAMPLE	6 CCV	× ×	×	o ccv	L SAMPLE	SAMPLE	3 SAMPLE	SAMPLE	SAMPLE	SAMPLE
# Filename		215		006 215 006	007 215_00			011 215_011	N	215	015 215_015	016 215_01	017 215_01	018 245_01	019 215 01	020 215 020	021 215 02	022 215_02	023 215_023			027 215 02				215_03	215	4 215	215	036 215 036

Stds used: 1=04WS0962 2=04WS0963 3=04WS0546 Flags used: spk=5% spike rule

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Sequence: 254310347 Instrument: GC22 Gas Chr. Analytical Method: EPA 8082

Gas Chromatograph #22 ECD
SOP Version: PCB_rv3

Begun: 02-AUG-2004

>LR			-		2:PCB126=757.162													
Stds Used	spk	spk	spk	spk	2 2:PCB	2	3	3	-		_						1	1
IOC SPK uL	н	н	1 1	н	н	П	Н											2 1
PDF	0.8289	0.8401	0.8415	0.8403	1.0	1.0	1.0											1.0
: Analyzed IDF	03-AUG-2004 06:00 1.0	03-AUG-2004 06:29 1.0	03-AUG-2004 06:57 1.0	03-AUG-2004 07:25 1.0	03-AUG-2004 08:22 1.0	03-AUG-2004 08:50 1.0	03-AUG-2004 09:19 1.0	03-AUG-2004 09:47 1.0	03-AUG-2004 10:43 1.0	03-AUG-2004 11:40 1.0	03-AUG-2004 12:08 1.0	03-AUG-2004 12:37 1.0	03-AUG-2004 13:05 1.0	03-AUG-2004 13:33 1.0	03-AUG-2004 14:02 1.0	US-AUG-ZUU4 14:50 1.0	03-AUG-2004 15:27 1.0	03-AUG-2004 15:55 1.0
Batch Matrix Analyz	93318 Soil	93318 Soil	93318 Soil	93318 Soil					93318 Soil	93318 Soil	93318 Soil	93318 Soil	93346 Soil	93346 Soil	93346 Soil	1105 0#555		
Samplenum	173688-012	173688-013	173688-014	173688-020	CCV	pcb500_100	ar1254	CCV	QC259510	173688-025	173688-030	173688-035	173688-040	173688-045	173688-050	TOO-07/5/T	CCV	pcb250_50
ne Type	' SAMPLE	SAMPLE	SAMPLE	SAMPLE	×	CCA	CCA	×	rcs	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAME LIE	×	CCV
# Filename Type	037 215_037	038 215_038	039 215 039	040 215 040	042 215_042	043 215_043	044 215_044	045 215 045	047 215_047	049 215 049	050 215 050	051 215 051	052 215 052	053 245 053	054 245_054	CCV_C14 CCV	057 215_057	058 215 058

Stds used: 1=04WS0962 2=04WS0963 3=04WS0546 Flags used: spk=5% spike rule

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Begun: 03-AUG-2004

Gas Chromatograph #6 ECD SOP Version: PCB_rv3 Instrument: GC06 Sequence: 204311979 Instru Analytical Method: EPA 8082

Stds used: 1=04WS0962 2=04WS0546 3=04WS1445 4=04WS0963
Flags used: spk=5% spike rule

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Gas Chromatograph #6 ECD SOP Version: PCB_rv3 Instrument: GC06 Sequence: 204311979 Instru Analytical Method: EPA 8082

Begun: 03-AUG-2004

# Filename	le Type	Samplenum	Batch Matrix Analvz	x Analyzed TDF	מכס	T.: 740 DOT	
216		QC259816	93396 Soil	-2004 11:33 1.	0.8273	4	אחיי אחיים אולים א
040 216 040	MSD	QC259817	93396 Soil	12:06 1.	832	۰,	
216		173724-002	93396 Soil	-2004 12:39 1.	• •	-, ۱	
	_	pcb250_50		13:46 1.	0	-, ۱	-
		173724-001	93370 Water	04-AUG-2004 16:37 1.	•	4	+
	ICS	QC259619	93346 Soil	5 1.			
	SAMPLE	173728-001	93346 Soil	004 19:09 1.	.835	f	
	BLANK	QC260156	93482 Soil	004 19:42 1.	83		
	ICS	QC260157	93482 Soil	2004 20:15 1.	.82	1 7	
	MS	QC260158	93482 Soil	20:48 1	. 84		
	MSD	QC260159	93482 Soil	004 21:21 1.	.821		
	MSS	173824-001	93482 Soil	21:54 1.	m		
		173825-001	93482 Soil	04-AUG-2004 22:27 1.0	84		
	CG	pcb500_100		04-AUG-2004 23:34 1.0	1.0		4
059 2216_059	×	CCV			•	•	F
		QC259936	93426 Soil	04 02	0.8289	2	
		QC259937	93426 Soil	2004	. 82	1 11	
	MS	QC259938	93426 Soil	05-AUG-2004 03:26 1.0			
	MSD	QC259939	93426 Soil	2004 03:59 1.	•	1 6	
	SAMPLE	173773-001	93426 Soil	04:33 1.			
	MSS	173773-002	93426 Soil	05:06 1.	•	1	
	SAMPLE	173773-003	93426 Soil	05:39 1	846		
	SAMPLE	173773-004	93426 Soil	90	84		
216	SAMPLE	173773-005	93426 Soil	06:46 1	. 00		
	CCV	pcb250_50		07:52 1	0		-
	×	CCV		004 08:25 1.	•		1
	CCV	ar1254		08:58 1.		•	
	×	CCV		05-AUG-2004 09:32 1.0		•	2
0 21	SAMPLE	173762-001	93426 Soil	:004 11:45 1.	0.8384	2	7
081 216 081	SAMPLE	173762-002	93426 Soil	05-AUG-2004 12:18 1.0	0.8463	'	

Stds used: 1=04WS0962 2=04WS0546 3=04WS1445 4=04WS0963 Flags used: spk=5% spike rule

SEQUENCE SUMMARY FOR 173746 PCB Soil Curtis & Tompkins Laboratories

Sequence: 204311979 Instrument: GC06 Analytical Method: EPA 8082

Gas Chromatograph #6 ECD SOP Version: PCB_rv3

Begun: 03-AUG-2004

# Filename Type Samplenum	Type	Samplenum	Batch Matrix Analyzed	Analyzed	IDF	PDF	IQC SPK uL	IQC SPK ul Stds Used	>LR
082 216_082	SAMPLE	173762-003	93426 Soil	05-AUG-2004 12:51 1.0	1.0	0.8333	2 1		
083 216_083	rcs	QC259510	93318 Soil	05-AUG-2004 14:00 1.0	1.0	0.8389	6 1	spk	
084 216 084	SAMPLE	173718-017	93426 Soil	05-AUG-2004 14:33 5.0	5.0				
085 216_085	SAMPLE	173718-020	93426 Soil	05-AUG-2004 15:06 5.0	5.0				
087 216_087	CCV	pcb500_100		05-AUG-2004 16:13 1.0	1.0	1.0	н	4	
088 216 088	×	CCV		05-AUG-2004 16:46 1.0	1.0			4	
089 216 089 CCV	CCV	ar1254		05-AUG-2004 17:19 1.0	1.0			2	

Stds used: 1=04WS0962 2=04WS0546 3=04WS1445 4=04WS0963 Flags used: spk=5% spike rule

02-AUG-2004 14:18	ID : 04WS0993B ID : 04WS1320A ID :	s Clean Comments Method	3665A	3665A	3665A	3665A	365A	3665A	3665A	3665A	3665A	3665A	365A	3665A	365A	3665A	3665A	3665A	3665A	365A	3665A mss	3665A	365A	3665A	365A	3665A
02-3	Spike #1 3 Spike #2 3 Spike #3 3 SOP Version	Sp 2 Sp 3 Analyses		PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PC8	PC8	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB		.05 PCB	
ary		Sp 1	.05	ج. 0	5	5	રું -	5	ج. 0	ج. 5	5	5	S	9	٠. د	ຣ່	ຣ໌ ດ	ج. 0	S	ຣ໌	5	٠. 5	5	Ī	5	-
Preparation Summary	মূৰ	al Prep Clean pH	1393	0.842602 1	0.839490 1	0.837802 1	0.838364 1	0.845737 1	0.840336 1	0.827267 1	0.836680 1	0.839208 1	0.840619 1	0.821288 1	0.841751 1	0.840336 1	0.833056 1	0.833889 1	0.833056 1	0.825355 1	0 84444 1	0.837802 1	0.845166 1	0.826993 1	0.827267 1	0.832501 1
repa	M P	Units Final	, S	23	, 25	. 23	, (3	23	- 25	, 23	, 32	ب 25	, 13	7	- 25	ب ک	بى	3	53	13	, ۲	53	7	52	7	52
Sample F	Analysis Bgroup Units Clean-up	trix Init Un	30.07 g	29.67 g	29.78 g	29.84 g	29.82 g	29.56 g	29.75 g	30.22 g	29.88 9	29.79 g	29.74 g -	30.44 g	29.7 g .	29.75 g ·	30.01 g	29.98 g .	30.01 g ~	30.29 g	ν σ. Σ.	29.84 9			30.22 9	30.03 g
les		Matr	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	soil	Soil	-	Soil	Soil	Soil	Soil	Soil
& Tompkins Laboratories	04 Buswell		Bouck & Lee, Inc.	~	બ્ઠ	Bouck & Lee, Inc.	~8	& Lee,	& Lee	& Lee.	& Lee,	& Lee,	Bouck & Lee, Inc.	ŏ	& Lee,	બ્ઠ	Lee,	Bouck & Lee, Inc.	Innovative Technical Solutions	/			_		_	
npkin	5 JG-20 s N.	Client	Bastand.																novativ	Geologica		Geologica				,
	93396 02-AUG-2004 Brook N. Bus 3550	כו	Ba	8	Ba	Ba	88	8 8	. 6	88	Ba	8	æ	8	89	Ba	88	Ba	Į.	e e		g	}		of 173746-010	173746-010
Curtis	ber acted by																								of 17	of 17
	Batch Number : Date Extracted: Extracted by : Prep Method :	Sample Type	173718-001	173718-002	173718-003	173718-004	173718-005	173718-006	173718-007	173718-008	173718-009	173718-010	173718-021	173718-022	173718-023	173718-024	173718-025	173718-026	173724-002	17776-005	44777	173746-015	0025081/ WR	-		

Relinguished By:

Prep Chemist:

Reviewed By:

Received By:

mily Date: 8/3/06

	ompkins, Ltd.	PCB SC	IL PREP LO	\mathbf{G}	BK 1940
	No: 43396		EPA 3550	0b Sonication	
LIMS Ana	lysis PCB		☐ EPA 3540	Oc Souther	Page 48
Extracted	by: Sp				
Date Extrac	eted: 3/2/04		Other	5 PFE (ASE Method#	_)
			- Other		
365/2	Sample ID	Sample Wt (a)	Timel 37.17 T		
1783	718-001	Sample William	Final Vol (mI	<u>Commen</u>	ts
173	718-002	30.07	25.0		
11.2	4	29.67	-		
	-003	29.78	-		
5	-004	29.84			
		29.82			
 	-006	129.56			
	007	29.75			
	-004	30.22	!		
	-009	29.88			
10	<u> </u>	79.79			
<u> </u>	- 021	29.74			
 -	-622	30,44			-
	-023	29.70			
	-024	29.75			
15	-025	30.01			
7===	-026	29,98			
1 /3-	724-002	30.01			
113	746-005 49	7 49.80.30,29			
<u> </u>	-010 4/201	50-3030m		MSS	
20	V -015	29.84			
	QC259814	29.58			
ردے	15	30.23			
MS	16	30,22			
MSD	V 17	30.03			
			39 8/2104		
		-			
			Ŋ	Mfg & Lot # / LIMS # / Time	Initials / Date
dried v	with CH ₂ Cl ₂ -rinsed gra	Sand weighed ou			BB\$12/04
	Off ml of surrog	anulas 190204 die	omaceous earth	50410410 504050993B	L 1/
0.0	mL of spike solution	are solution was add	d to all samples	04W 20993B	
1.1 CH ₂ C ₁₂ (101#	EN19716 :Acetone	(lot# Eik 4408])	was added to all	4 02515W 40	
Sonicate	ed 3 times w/≥100mL □	PFE extracted s	Exhlet extracted	-y	
			se Filters used:	NA	
		PFE (ASE)	'soxhlets on at:	NA	
Fv	stracts filtered there 1. 1. 1	PFE (ASE)	soxhlets off at:	NH	
Concer	stracts filtered through bal strated to volumes noted a	ked, CH ₂ Cl ₂ .riffsed {	ramular Na ₂ SO ₄	V STBAMH50	
- 33 0. .	EPA 36654 Close	i-up: vortexed w/ 10	O Hexane Lot#	CKSS6 BET	
	Centrifuged for 1 m	in; 10mL transferred	InL H ₂ SO ₄ Lot#	X26046 JB	
	8 · · · ·	m, rome mansieriet	to labelled viai	V	∀
			`\		
2/2	$\nabla / \Delta / \Delta / \Delta $	Camalina 10	\		0
2,7	W/2/04	Continued on		Conniles 1	1100 8/11.
Extraction	Chemist / Date	Continued on	Jage	The state of the s	- 12/04

Reviewed by / Date

Continued From Page __

SAMPLE ID	WEIGHT	ANALYSIS	Comments
173724-002	30.25	8081	Comp (A - H)
 1	30.01	PC13	1
173727-00 1A	29.98	8081	
4 4	30.31	PCB	
173728-001A	30.08	9081	
4	29.94	PCB	
			7
	1		
	1300		
	1/3//		
		•	
			Continued on Page
		Read and Understood By	
Yuk =	7/30/00	2	
Signed	David	Signer	Date

Whyl

73098

Read and Understood By

Hannis

Continued on Page

Date

SAMPLE ID	WEIGHTB)	ANALYSIS	COMMENTS
1,			
1737/8-00/A	30,07	PCB	
-02	39.67		
-013	29.78		
-24	39.84		
-025	29.82		
-006	29.56		
-007	29.75		
-08	30.22		
-009	29.88		
-010	39.79		
-011	29.66		
-012	39.83		
-013	29.00		
-014	39.73		
-95	29.65		
-06	29.63		
-017	39,97		
-018	30.03		
-019	29.69		
-020	29.87		m55
-02/	29.74		
-022	30,44		
-23	29.70		
-024	29.75		
-625	30,01		
V-036 V	29.98		
MB	30.16		EM43310410
2CS	30 44		1. 1. 1.
ms	30.06		173718-020A
msD	29.82	7	110110-0004
	1,1,00		
		¥ 1) 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		(;) W	
			Continued on Pega
-1 /Ann		Read and Understood By	Continued on Page

Junger All

8/1/M Date

Signed

Cate



METALS Results & QC Summary



		Lea i	
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	Prep:	EPA 3050
Project#:	STANDARD	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	07/30/04
Matrix:	Soil	Received:	07/30/04
Units:	mg/Kg	Prepared:	08/02/04
Diln Fac:	1.000	Amalyzed:	08/02/04
Batch#:	93374	1	00,02,01

Field ID	Type	Lab ID	Resu.	t	RL	Bas	is Moisture
GA9SSCOMP501-504		173746-005		. 8	0.14	dry	2%
DUP073004COMP501-504	SAMPLE	173746-010	**	.6	0.17	dry	2%
GA9SSCOMP505-508	SAMPLE	173746-015	**	. 6	0.15	dry	3%
	BLANK	QC259725	ND		0.15	as rec	eived



Batch QC Report

		Lend	
Lab #:	173746	location:	GA-9 Stockpile Sampling
Client:	Geologica	Irep:	EPA 3050
Project#:	STANDARD	Inalysis:	EPA 6010B
Analyte:	Lead	Iiln Fac:	1.000
Matrix:	Soil	Fatch#:	93374
Units:	mg/Kg	Frepared:	08/02/04
Basis:	as received	nalyzed:	08/02/04

BS QC259726 100.0 102.5 103 78-120 BSD QC259727 100.0 161.0 161.0	Туре	Lab ID	Spiked	Rest lt	%REC	Limits	BBB	
BSD 0C259727 100 0 101 0 101 0 101		QC259726	100.0		103		N.F.D	/
	BSD	QC259727	100.0	101.0	101	78-120	1	20



Batch QC Report

		Lead	
Lab #:	173746	Location:	GA-9 Stockpile Sampling
Client:	Geologica	Prep:	EPA 3050
Project#:	STANDARD	Aralysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	1.000
Field ID:	ZZZZZZZZZ	Batch#:	93374
MSS Lab ID:	173729-004	Sampled:	07/29/04
Matrix:	Soil	R∈ceived:	07/29/04
Units:	mg/Kg	Prepared:	08/02/04
Basis:	dry	Ar alyzed:	08/02/04

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moist	ure RP	D Lim
MS	QC259728	178.3	100.5	259.3	81	42-125	7%		
MSD	QC259729		107.5	278.0	93	42-125	7%	4	30



REPORTING SUMMARY FOR 173746 METALS Soil Curtis & Tompkirs Laboratories

Lab ID	Two to	D			P
	Inst ID	Analyzed		IDF	 _ B
173746-005	MET07	08/02/04	09:47	1.0	+
173746-010	MET07	08/02/04	10:00	1.0	+
173746-015	MET07	08/02/04	10:04	1.0	+
QC259725	MET07	08/02/04	07:19	1.0	+
QC259726	MET07	08/02/04	07:23	1.0	+
QC259727	MET07	08/02/04	07:27	1.0	+
QC259728	MET07	08/02/04	08:12	1.0	+
QC259729	MET07	08/02/04	08:16	1.0	+
QC259730 QC259730	MET07 MET07	08/02/04 08/02/04	07:40 07:49	5.0 5.0	+

SERIAL DILUTION USER REPORT Curtis & Tompkins Laboratories EPA 6010B

Instid : MET07 Instid : MET07

Seqnum : 74310009010 Segnum : 74310009011

Filename: tr243949 Filename : tr243948

IDF : 5.0 : 1.0 PDF : 51.02 : 51.02 Run type : MSS Run type : SER

Samplenum: 173729-004 Samplenum: QC255730 Matrix : Soil Matrix : Soil

Batchnum: 93374 Batchnum: 93374

Inj : 02-AUG-2004 07:32 Inj : 02-AUG-2004 07:40

Units : mg/Kg

IDF

PDF

Analyte	MSS	RL	SER	RL	%D	MAX %	D Flags]
Aluminum	*** usable	MSS data no	t found ***					
Antimony	ND	3.06	ND	15.3		10	u	١
Arsenic	9.80	0.255	9.52	1.28	3	10	u	١
Barium	143	0.510	141	2.55	1	10	u	
Beryllium	0.432	0.102	ND	0.510	~ ~	10	u	١
Cadmium	ND	0.255	ND	1.28		10	u	
Calcium	*** usable	MSS data no	t found ***					1
Chromium	25.2	0.510	26.3	2.55	4	10	u	
Cobalt	7.81	1.02	8.24	5.10	6	10	u	-
Copper	69.9	0.510	69.6	2.55	0	10	u	1
Iron	*** usable	MSS data no	ot found ***					-
Lead	166	0.153	174	0.765	5	10	u	-
Magnesium	3620	25.5	3740	128	3	10		١
Manganese	318	0.510	319	2.55	0	10		١
Molybdenum	ND	1.02	ND	5.10		10	u	1
Nickel	26.7	1.02	28.1	5.10	5	10	u	I
Selenium	0.607	0.255	1.37	1.28		10	r	١
Silver	ND	0.255	ND	1.28		10	u	
Thallium	ND	0.255	ND	1.28		10	u	
Vanadium	39.3	0.510	40.3	2.55	3	10	u	
Zinc	134	1.02	139	5.10	4	10	u	
Titanium	*** usable	MSS data no	ot found ***					

SERIAL DILUTION USER REPORT Curtis & Tompkins Laboratories EPA 6010B

Instid : MET07 Instid : MET07

Seqnum : 74310009013 Seqnum : 74310009010 Filename: tr243951 Filename : tr243948

: 5.0 IDF : 1.0 : 51.02 PDF PDF : 51.02 Run type : MSS Run type : SER

Samplenum: 173729-004 Samplenum: QC259730

Matrix : Soil : Soil Natrix Batchnum: 93374 Batchnum: 93374

Inj : 02-AUG-2001 07:49 nj : 02-AUG-2004 07:32

Jnits : mg/Kg

DF

Analyte	MSS	RL	SER	L	%D	MAX %	D Flags
num	*** usable MS		<u> </u>				
1:n ony	ND	3.06	ND	5.3		10	
Arsenic	9.80	0.255	9.85	.28	1	10	
Barium	143	0.510	140	:.55	2	10	
Beryllium	0.432	0.102	ND	1.510		10	
Cadmium	ND	0.255	ND	28		10	
Calcium	*** usable MS	SS data no	ot found ***				
Chromium	25.2	0.510	26.0	2.55	3	10	
Cobalt	7.81	1.02	8.14	3.10	4	10	
Copper	69.9	0.510	69.4	2.55	1	10	
Iron	*** usable MS	SS data no	ot found ***				
Lead	166	0.153	174).765	5	10	
Magnesium	3620	25.5	3750	128	4	1,0	
Manganese	318	0.510	321	2.55	1	10	
Molybdenum	ND	1.02	ND	5.10		10	
Nickel	26.7	1.02	28.1	5.10	5	10	
Selenium	0.607	0.255	ND	1.28		10	u
"lver	ND	0.255	ND	1.28		10	
. "	ND	0.255	ND	1.28		10	
um	39.3	0.510	40.1	2.55	2	10	
Zinc	134	1.02	139	5.10	4	10	
Titanium	*** usable M	SS data no	ot found ***				

Curtis & Tompkins Laboratories SEQUENCE SUMMARY

Begun: 02-AUG-2004

Analytical Method: Sequence: 74310009 EPA 6010B Instrument: MET07 TJA Trace ICP SOP Version: 6010B_rv7

		1		. 10	TIOG \$100E	T/3/30-003	031 CI243969 SAMEUE
8:CA=619400		_	22 11	3004 00.30	1	1	
2:AL=324800			48.08	02-AUG-2004 09:16 1.0	93374 Soil	73730-	0 tr243968
2:AL=421100			40.32	02-AUG-2004 09:12 1.0	93374 Soil	173730-001	029 tr243967 SAMPLE
			51.02	02-AUG-2004 09:08 1.0	93374 Soil	173729-008	028 tr243966 SAMPLE
1							027 tr243965 CCB
	7		1.0	۲.			026 tr243964 CCV
2:FE=318400			47.62	02-AUG-2004 08:51 1.0	93374 Soil	173729-007	025 tr243963 SAMPLE
			50.0	02-AUG-2004 08:47 1.0	93374 Soil	173729-005	024 tr243962 SAMPLE
			50.0	02-AUG-2004 08:43 5.0	93374 Soil	173727-001	023 tr243961 SAMPLE
3:FE=258200			48.54	02-AUG-2004 08:38 1.0	93374 Soil	173729-003	022 tr243960 SAMPLE
3:FE=303100			43.48	02-AUG-2004 08:34 1.0	93374 Soil	173729-002	021 tr243959 SAMPLE
3:FE=420100			39.68	02-AUG-2004 08:30 1.0	93374 Soil	173729-001	020 tr243958 SAMPLE
4:FE=330400		1	50.0	02-AUG-2004 08:26 1.0	93374 Soil	173727-001	019 tr243957 SAMPLE
5:FE=414900			43.48	02-AUG-2004 08:22 1.0	93374 Soil	173724-002	018 tr243956 SAMPLE
I			50.0	02-AUG-2004 08:16 1.0	93374 Soil	QC259729	017 tr243955 MSD
4:FE=494200 S			46.73	02-AUG-2004 08:12 1.0	93374 Soil	QC259728	016 tr243954 MS
1			1.0	02-AUG-2004 08:09 1.0			015 tr243953 CCB
	9		1.0	02-AIIG-2004 08:02 1.0			1177 CYBEPCA+ 710
			51.02	02-AUG-2004 07:49 5.0	93374 Soil	QC259730	013 tr243951 SER
3:FE=397600		4	51.02	02-AUG-2004 07:44 1.0	93374 Soil	173729-004	012 tr243950 MSS
			51.02	02-AUG-2004 07:40 5.0	93374 Soil	59	ф
3:FE=399300		4	51.02	02-AUG-2004 07:32 1.0	93374 Soil	173729-004	010 tr243948 MSS
		Н	50.0	02-AUG-2004 07:27 1.0	93374 Soil	QC259727	009 tr243947 BSD
		ч	50.0	02-AUG-2004 07:23 1.0	93374 Soil	QC259726	008 tr243946 BS
		μ	50.0	02-AUG-2004 07:19 1.0	93374 Soil	QC259725	007 tr243945 BLANK
5:MG=548100	5		1.0	02-AUG-2004 07:14 1.0			006 tr243944 ICSAB
4:MG=531700	4	ц	1.0	02-AUG-2004 07:11 1.0			005 tr243943 ICSA
	3		1.0	02-AUG-2004 07:01 1.0			004 tr243942 CRI
			1.0	02-AUG-2004 06:57 1.0			003 tr243941 ICB
	2		1.0	02-AUG-2004 06:53 1.0			002 tr243940 ICV
	1		1.0	02-AUG-2004 06:49 1.0			1 tr243939
>LR	Stds Used	IOC SPK uL	PDF	Analyzed IDF	Batch Matrix	Samplenum	# Filename Type

Stds used: 1=04WS1252 2=04WS1316 3=04WS1044 4=04WS1124 5=04WS1256 6=04WS1317 7=04WS1319 8=04SS171 9=04SS172 10=04WS1318

Analyst: ____,
Page 1 of 3 Me Who

Date: $8/\sqrt{3}$

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Begun: 02-AUG-2004

Analytical Method: EPA 6010B Sequence: 74310009 Instrument: MET07 SOP Version: 6010B_rv7 TJA Trace ICP

	±0	-	1.0	02-AUG-2004 12:26 1.0			062 tr244000 CCV
U. Ch-7 : 1 : 0 0	2	1	49.50	4 12:18 1.	93375 Soil	173735-007	061 tr243999 SAMPLE
3.CA-974700			· ·	2-AUG-2004 12:11	3375	73735-0	60 tr243998
4.C3-145000		٢	ι	-AUG-2004 12:07 1.	3375	73735-0	059 tr243997 SAMPLE
5:CA=442200		_	۸ ا د د د د د د د د د د د د د د د د د د د	-AUG-2004 12:02 1.) \(\bullet \)	73735-00	8 tr243996
4:CA=326600			л	ATTC 2004 12:00 1	1 (5 / LIZES999
4:FE=286200			50.51	-AUG-2004 11:58	75.0	72725-0	7 + - 2 / 2 0 0 5 -
5:MG=1777000			51.55	02-AUG-2004 11:54 1.0	75 S	73690-00	6 tr243994
5:MG=1308000			48.08	02-AUG-2004 11:49 1.0	93375 Soil	173690-003	5 tr243993
5:MG=1535000			42.02	02-AUG-2004 11:45 1.0	93375 Soil	9	054 tr243992 SAMPLE
5:MG=152500			40.65	02-AUG-2004 11:41 1.0	93375 Soil	173690-001	053 tr243991 SAMPLE
	8 9		36.50	02-AUG-2004 11:36 1.0	93375 Soil	QC259737	052 tr243990 PDS
- I			1.0	02-AUG-2004 11:32 1.0			051 tr243989 CCB
	7		1.0	7			050 tr243988 CCV
2:MG=453300		2	36.50	02-AUG-2004 11:20 5.0	93375 Soil	QC259736	049 tr243987 SER
2:MG=452000		2	36.50	02-AUG-2004 11:16 5.0	93375 Soil	QC259736	048 tr243986 SER
- 1		Ъ	37.59	02-AUG-2004 11:08 1.0	93375 Soil	5973	047 tr243985 MSD
5:MG=1735000 co			45.45	02-AUG-2004 11:04 1.0	93375 Soil	QC259734	046 tr243984 MS
5:MG=2288000	:	л	0 <u>5</u> کال	ח ו פאיחו יחחר בחוול ב	רוים מקנכם	שטט סטפניי	SAM COOCIACAT
		ω	50.0	02-AUG-2004 10:52 1.0	93375 Soil	QC259733	044 tr243982 BSD
		ω	50.0	02-AUG-2004 10:48 1.0	93375 Soil	5973	043 tr243981 BS
		1	50.0	02-AUG-2004 10:44 1.0	93375 Soil	QC259731	042 tr243980 BLANK
1:FE=198300			49.02	02-AUG-2004 10:04 1.0	93374 Soil	173746-015	041 tr243979 SAMPLE
1:FE=166000			55.56	02-AUG-2004 10:00 1:0	93374 Soil	173746-010	040 tr243978 SAMPLE
			1.0	02-AUG-2004 09:56 1.0			039 tr243977 CCB
	6	2	1.0	02-AUG-2004 09:52 1.0			038 tr243976 CCV
1:FE=190600			46.30	02-AUG-2004 09:47 1.0	93374 Soil	173746-005	037 tr243975 SAMPLE
3:FE=274600			48.54	02-AUG-2004 09:42 1.0	93374 Soil	173741-001	036 tr243974 SAMPLE
3:FE=379600			43.10	02-AUG-2004 09:38 1.0	93374 Soil	173730-005	035 tr243973 SAMPLE
2:AL=370300			51.02	02-AUG-2004 09:34 1.0	93374 Soil	173730-004	4 tr243
1:ZN=8860.00			33.11	02-AUG-2004 09:30 25.0	93374 Soil	173730-003	3 tr243971
5:CA=152800		ш	33.11	02-AUG-2004 09:26 5.0		173730-003	2 tr243970 SAM
>LR	Stds Used	IQC SPK uL	PDF	: Analyzed IDF	Batch Matrix	Samplenum	# Filename Type

Stds used: 1=04WS1252 2=04WS1316 3=04WS1044 4=04WS1124 5=04WS1256 6=04WS1317 7=04WS1319 8=04SS171 9=04SS172 10=04WS1318

Analyst: / Page 2 of 3

Date:

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Begun: 02-AUG-2004

Sequence: 74310009 Instru Analytical Method: EPA 6010B Instrument: MET07 TJA Trace ICP SOP Version: 6010B_rv7

# Filename Type	Samplenum	Batch Matrix Analyzed IDF	PDF	IQC SPK uL	Stds Used	>LR
063 tr244001 CCB		02-AUG-2004 12:29 1.0	1.0			
tr244002	173735-003	93375 Soil 02-AUG-2004 12:33 10.0	41.32			
065 tr244003 SAMPLE	173735-008	93375 Soil 02-AUG-2004 12:37 1.0	51.02			3:FE=193800
066 tr244004 SAMPLE	173735-009	93375 Soil 02-AUG-2004 12:42 1.0	48.08			4:CA=816000
	173735-010	93375 Soil 02-AUG-2004 12:46 1.0	35.71			4:CA=122/000
068 tr244006 SAMPLE	173735-011	93375 Soil 02-AUG-2004 12:50 1.0	50.0			4:FE=250000
069 tr244007 SAMPLE	173740-001	93375 Miscel 02-AUG-2004 12:55 1.0	48.08	بر		T: V=Z3/00.0
070 tr244008 SAMPLE	173740-002	93375 Miscel 02-AUG-2004 12:59 1.0	54.95			20000
071 tr244009 SAMPLE	173748-007	93375 Soil 02-AUG-2004 13:04 1.0	42.02			4:FE=387000
072 tr244010 SAMPLE	173740-001	93375 Miscel 02-AUG-2004 13:09 10.0	48.08			1 200
073 tr244011 ICSAB		02-AUG-2004 13:13 1.0	1.0		U	5:MG≡4 <i>9</i> 2800
074 tr244012 CCV		02-AUG-2004 13:21 1.0	1.0		6	
075 tr244013 CCB		02-AUG-2004 13:25 1.0	1.0			

Stds used: 1=04WS1252 2=04WS1316 3=04WS1044 4=04WS1124 5=04WS1256 6=04WS1317 7=04WS1319 8=04SS171 9=04SS172 10=04WS1318

Analyst:
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Date:

Method: 6010B Standard: blank Run Time: 08/02/04 06:27:38

Elem Avge SDev %RSD	Sb2068003 .001 37.1	Sb206A .003 .001 22.8	As1890 .001 .001 71.5	Ba4934 .001 .001 61.6	Be3130 254 .004 1.75	Cd2265 .004 .002 45.4	Cr2677 .000 .000 4.80
#1 #2	004 002	.002	.002	.002	250 257	.005	.000
Elem Avge SDev %RSD	Co2286 001 .000 25.6	Cu3247 .005 .000 7.97	Pb2203 .005 .001 10.4	Pb220A 003 .000 15.5	Mo2020 .001 .000 17.0	Ni2316 .003 .002 63.7	Se1960 012 .001 4.93
#1 #2	001 001	.006	.005	002 003	.002	.004	011 012
Elem Avge SDev %RSD	Se196A .007 .004 60.3	Ag3280 .001 .001 141.	Tl1908 006 .001 l1.0	V_2924 .001 .000 11.2	Zn2138 .033 .001 1.99	Al3082 .0531 .0010 1.867	Ca3179 0024 .0004 14.81
#1 #2	.004	.000	005 006	.001 .001	.033	.0524	0021 0026
Elem Avge SDev %RSD	Fe27140013 .0002 14.70	Mg2790 .0003 .0002 55.17	Mn2576 .001 .000 5.36	Ti3349 .191 .004 1.82	:		
#1 #2	0011 0014	.0004	.001	.188 .193			

Method: 6010B Standard: cst hi Run Time: 08/02/04 06:31:02

Elem	Sb2068	Sb206A	As1890	Ba4934	Be3130	Cd2265	Cr2677
Avge	1.40	.753	.307	15.1	2.84	1.16	.245
SDev	.06	.038	.013	.9	.15	.06	.012
%RSD	4.25	5.04	4.29	5.€9	5.19	5.05	4.83
#1	1.36	.726	.298	14.5	2.73	1.12	.237
#2	1.44	.780	.316	15.7	2.94	1.20	.254
Elem	Co2286	Cu3247	Pb2203	Pb220A	Mo2020	Ni2316	Se1960
Avge	.793	.505	.919	.942	2.38	1.95	.333
SDev	.036	.027	.028	.041	.15	.09	.012
%RSD	4.59	5.36	3.00	4.39	6.13	4.87	3.57
#1	.767	.486	.900	.912	2.27	1.88	.324
#2	.819	.524	.939	.971	2.48	2.01	.341
Elem	Se196A	Ag3280	T11908	V_2924	Zn2138	Al3082	Ca3179
Avge	.377	.282	.220	.879	.212	.1640	.3092
SDev	.016	.012	.012	.044	.010	.0088	.0150
%RSD	4.21	4.14	5.37	5.01	4.55	5.349	4.864
#1	.366	.274	.212	.848	.205	.1578	.2985
#2	.389	.290	.229	.910	.219	.1702	.3198
Elem Avge SDev %RSD	Fe2714 .1277 .0092 7.230	Mg2790 .1791 .0094 5.237	Mn2576 1.13 .06 5.11	Ti3349 7.01 .37 5.24			
#1 #2	.1212 .1343	.1725 .1857	1.09 1.18	6.75 7.27			

Method: 6010B Slope = Conc(SIR)/IR

•							
Element Sb206A As1890 Ba4934 Be3130 Cd2265 Cr2677 Co2286 Cu3247 Pb2203 Pb220A Mo2020 Ni2316 Se1960 Se196A Ag3280 Tl1908 V_2924 Zn2138 Al3082 Ca3179 Fe2714 Mg2790	Wavelen 206.831 206.832 189.042 493.409 313.042 226.502 267.716 228.616 324.754 220.351 220.352 202.030 231.604 196.021 196.022 328.068 190.864 292.402 213.856 308.215 317.933 271.441 279.079	High std Multiple	Low std Standards	Slope 7(8.472 1:06.45 1:35.84 6:.2570 31.2298 8:.6650 817.257 6:1.367 4(0.441 5:47.570 5:24.896 4:21.003 2:57.177 1:452.45 1:346.71 3:55.624 2:232.40 5:9.395 576.840 9188.77 6:419.49 8:115.02 1:1179.6	Y-intercept 2.04411 -3.53568 -1.67862087123 7.91692358990354929 .632106 -2.15129 -2.73396 1.39432616473703368 16.9614 -8.95730225650 12.3731362202 -19.1462 -488.333 15.3154 10.1897 -3.22076	08/02/04 08/02/04	06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02
V_2924 Zn2138 Al3082 Ca3179 Fe2714	292.402 213.856 308.215 317.933 271.441	Multiple Multiple Multiple Multiple	Standards Standards Standards Standards Standards	569.395 576.840 9188.77 6419.49 8115.02	362202 -19.1462 -488.333 15.3154 10.1897 -3.22076 119997 .000000	08/02/04 08/02/04 08/02/04 08/02/04	06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02 06:31:02

INITIAL CALIBRATION CHECK STANDARD Curtis & Tompkins Laboratories

Run Name :

Instid : MET07 Seqnum : 74310009001 Injected: 02-AUG-2004 06:49 Filename: tr243939

Caltype :

Standards: 04WS1252

Analyte	SpkAmt	QuantAmt			Max %D Flags	
Aluminum		1.022.000		2	5	
Antimony		1.020.000		2	5	
Arsenic		511.0000		2	5	
Barium		1.020.000		2	5	
Beryllium		1.02.0000		2	5	
Cadmium		1.02.0000		2	5	
Calcium		2048.000		2	5	
Chromium	200.0000	204.0000	ug/L	2	5 5	
Cobalt	500.0000	511.0000	ug/L	2	5	
Copper	200.0000	205.0000	ug/L	3	5	
Iron	1000.000	990.6000	ug/L	- 1	5	
Lead		512.0000		2	5	
Magnesium		2037.000		2	5	
Manganese		1.02.0000		2	5	
Molybdenum		1.020.000		2	5	
Nickel		512.0000		2	5	
Selenium		512.0000		2	5	
Silver		1.02.0000		2	5	
Thallium		507.0000		1	5	
Titanium		0.020.000		2	5	
Vanadium	500.0000	512.0000	ug/L	2	5	
Zinc	100.0000	.02.0000	ug/L	2	5	

SECOND SOURCE CALIBRATION VERIFICATION Curtis & Tompkins Laboratories

Injected : 02-AUG-2004 06:53
Caltype :

Standards: 04WS1316

Analyte	SpkAmt (uantAmt Units %D Max Flags	
Aluminum	500.0000 12.1000 ug/L 2 10	
Antimony	500.0000 504.0000 ug/L 1 10	
Arsenic	250.0000 246.0000 ug/L -2 10	ł
Barium	500.0000 480.0000 ug/L -4 10	l
Beryllium	50.00000 49.40000 ug/L -1 10	ļ
Cadmium	50.00000 50.30000 ug/L 1 10	
Calcium	1000.000 1032.000 ug/L 3 10	l
Chromium	100.0000 100.0000 ug/L 0 10	
Cobalt	250.0000 044.0000 ug/L -2 10	
Copper	100.0000 99.80000 ug/L 0 10	- 1
Iron	500.0000 511.1000 ug/L 2 10	
Lead	250.0000 253.0000 ug/L 1 10 1000.000 2021.000 ug/L 2 10	
Magnesium	1000.000 021.000 ug/L 2 10	
Manganese	50.00000 49.20000 ug/L -2 10	
Molybdenum	500.0000 305.0000 ug/L 1 10	
Nickel	250.0000 049.0000 ug/L 0 10	
Selenium	250.0000 250.0000 ug/L 0 10	
Silver	50.00000 49.20000 ug/L -2 10	
Thallium	250.0000 342.0000 ug/L -3 10	
Titanium	500.0000 498.0000 ug/L 0 10	
Vanadium	250.0000 345.0000 ug/L -2 10	
Zinc	50.00000 49.50000 ug/L -1 10	

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07 TJA Trace ICP

Seqnum: 74310009003 Run Name: Injected: 02-AUG-2004 06:57

Filename: tr243941 Run Type: ICB

Analyte	QuantAmt	RL	Units	Req Flags
Aluminum	ND	100.0000	ug/L	<rl< td=""></rl<>
Antimony	ND	60.00000	ug/L	<rl< td=""></rl<>
Arsenic	ND	5.000000	ug/L	<rl< td=""></rl<>
Barium	ND	10.00000	ug/L	<rl< td=""></rl<>
Beryllium	ND	2.000000	ug/L	<rl< td=""></rl<>
Cadmium	ND	5.000000	ug/L	<rl< td=""></rl<>
Calcium	ND	500.0000	ug/L	<rl< td=""></rl<>
Chromium	ND	10.00000	ug/L	<rl< td=""></rl<>
Cobalt	ND	10.00000	ug/L	<rl< td=""></rl<>
Copper	ND	10.00000	ug/L	<rl< td=""></rl<>
Iron	ND	100.0000	ug/L	<rl< td=""></rl<>
Lead	ND	3.000000	ug/L	<rl< td=""></rl<>
Magnesium	ND	500.0000	ug/L	<rl< td=""></rl<>
Manganese	ND	10.00000	ug/L	<rl< td=""></rl<>
Molybdenum	[6.1500]	20.00000	ug/L	<rl< td=""></rl<>
Nickel	ND	20.00000	ug/L	<rl< td=""></rl<>
Selenium	ND	5.000000	ug/L	<rl< td=""></rl<>
Silver	ND	5.000000	ug/L	<rl< td=""></rl<>
Thallium	ND	5.000000	ug/L	<rl< td=""></rl<>
Titanium	[1.0700]	10.00000	ug/L	<rl< td=""></rl<>
Vanadium	ND	10.00000	ug/L	<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

LOW-LEVEL PERFORMANCE VERIFICATION STANDARD Curtis & Tompkins Laboratories

Instid : MET07 Run Name :

Filename : tr2/3942 Injected : 02-AUG-2004 07:01
Caltype : Segnum : 74310009004

Standards: 04WS1044

Analyte		QuantAmt			Max %D	Flags
Aluminum	100.0000			7	50	
Antimony	60.00000	59.00000	ug/L	-2	50	
Arsenic	5.000000			-31	50	
Barium	10.00000	9.810000	ug/L	-2	50	
Beryllium	2.000000	920000	ug/L	-4	50	
Cadmium	5.000000	5.240000	ug/L	5	50	
Calcium	200.0000	217.7000	ug/L	9 3	50	
Chromium	10.00000			3	50	:
Cobalt	20.00000	1.9.90000	ug/L	-1	50	
Copper	10.00000	1.0.40000	ug/L	4	50	
Iron	100.0000	1.12.0000	ug/L	12	50	
Lead	3.000000	5.230000	ug/L	8	50	
Magnesium	200.0000	206.4000	\mathtt{ug}/\mathtt{L}	3	50	
Manganese	10.00000	9.960000	ug/L	0	50	
Molybdenum	20.00000	21.80000	ug/L	9	50	
Nickel	20.00000	20.30000	ug/L	2	50	
Selenium	5.000000	''.400000	ug/L	48	50	
Silver	5.000000	4:.450000	ug/L	-11	50	
Thallium	5.000000	6.130000	ug/L	23	50	
Vanadium	10.00000			3	50	
Zinc	20.00000	1.9.10000	ug/L	- 5	50	

INTERFERENCE CHECK STANDARD A Curtis & Tompkin; Laboratories

Instrument: MET07

TJA Trace ICP

Segnum: 74310009005

Run Name:

Injected: 02-AUG-2004 07:11

Filename: tr243943 Run Type: ICSA

Analyte	QuantAmt		Req Flags	
Antimony	[3.0200]	50.00000 ug/L	<rl< td=""><td></td></rl<>	
Arsenic	[4.9900]	J,	<rl< td=""><td></td></rl<>	
Barium	[0.1050]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Beryllium	[-0.936]	2.000000 ug/L	<rl< td=""><td></td></rl<>	
Cadmium	[0.5280]	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Chromium	[3.0600]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Cobalt	[0.6910]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Copper	[-1.210]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Lead	[-0.362]	3.000000 ug/L	<rl< td=""><td></td></rl<>	
Manganese	[3.4300]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Molybdenum	[0.5290]	20.00000 ug/L	<rl< td=""><td></td></rl<>	
Nickel	[2.0500]	20.00000 ug/L	<rl< td=""><td></td></rl<>	
Selenium	[-2.460]	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Silver	[-0.379]	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Thallium	[2.1400]	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Titanium	23.30000	10.00000 ug/L	<rl ***<="" a+="" td=""><td></td></rl>	
Vanadium	[-2.840]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Zinc	[-0.320]	20.00000 ug/L	<rl< td=""><td></td></rl<>	

SPIKED INTERFERENTS								
Analyte	SpikeAmt)uantAmt	Units	%REC				
Aluminum	500000	513700	ug/L	103				
Calcium	500000	165500.	ug/L	93				
Iron	200000	82000	ug/L	91				
Magnesium	500000	531700	ug/L	106				

INTERFERENCE CHICK STANDARD AB Curtis & Tompkins Laboratories

Instid : MET07

Run Name :

Seqnum : 74310009006 Filename : tr:43944 Injected : 02-AUG-2004 07:14 Caltype :

Standards: 04WS1256

Analyte	SpkAmt		Units	%D Max	%D Flags
Aluminum	500000.0	529200.0	ug/L	6	
Antimony	500.0000	543.0000	ug/L	9	20
Arsenic		528.0000		6	20
Barium		484.0000		-3	20
Beryllium	500.0000	506.0000	ua/L	1	20
Cadmium	1000.000	942.0000	ug/L	-6	20
Calcium	500000.0	477000.0	ug/L	-5	20
Chromium	500.0000	479.0000	ua/L	-4	20
Cobalt	500.0000	485.0000	ug/L	-3	20
Copper	500.0000	519.0000	ug/L	4	20
Iron	200000.0	187400.0	ug/L	-6	
Lead	1000.000	989.0000	ug/L	-1	20
Magnesium	500000.0	548100.0	ug/L	10	
Manganese	500.0000	477.0000	uq/L	-5	20
Molybdenum	500.0000	505.0000	ug/L	1	20
Nickel	1000.000	925.0000	ug/L	- 8	20
Selenium	500.0000	538.0000	ug/L	8	20
Silver	1000.000	890.0000	ug/L	-11	20
Thallium		498.0000		0	20
Titanium	20000.00	21500.00	ug/L	8	-
Vanadium	500.0000	485.0000	ug/L	-3	20
Zinc	1000.000	1040.000	ug/L	4	20

CONTINUING CALIBRATION REPORT Curtis & Tompking Laboratories

Instid : MET07 Run Name : IDF : 1.0

Seqnum : 74310009014 Filename : tr243952 Injected : 02-AUG-2004 08:02

Caltype :

Standards: 04WS1317

						10-1
Analyte	RF/CF Spl:Amt	QuantAmt	Units	%D	Max %D	Flags
Aluminum	500.0000	519.6000	ug/L	4	10	
Antimony		509.0000		2	10	
Arsenic	250.0000	249.0000	ug/L	0	10	
Barium	500.0000	494.0000	ug/L	-1	10	
Beryllium	50.00000	49.60000	ug/L	-1	10	
Cadmium	50.00000	50.30000	ug/L	1	10	
Calcium	1000.000	1031.000	ug/L	3	10	
Chromium	100.0000	101.0000	ug/L	1	10	
Cobalt		244.0000		-2	10	
Copper	100.0000	103.0000	ug/L	3	10	
Iron	500.0000	486.5000	ug/L	-3	10	
Lead	250.0000	250.0000	ug/L	0	10	
Magnesium	1000.000	1026.000	ug/L	3	10	
Manganese		49.50000		-1	10	
Molybdenum	500.0000	512.0000	ug/L	2	10	
Nickel	250.0000	249.0000	ug/L	0	10	
Selenium	250.0000	247.0000	ug/L	-1	10	
Silver	50.0000	49.80000	ug/L	0	10	
Thallium	250.0000	246.0000	ug/L	-2	10	
Titanium	500.0000	506.0000	ug/L	1	10	
Vanadium	250.0000	247.0000	ug/L	-1	10	
Zinc	50 00000	49.50000		-1	10	

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07 TJA Trace ICP

Seqnum: 74310009015 Run Name: Injected: 02-AUG-2004 08:09

Filename: tr243953 Run Type: CCB

Analyte	QuantAmt	RL Units	Req Flags	
Aluminum	ND	100.0000 ug/L	<rl< td=""><td></td></rl<>	
Antimony	ND	60.00000 ug/L	<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Barium	ND	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Beryllium	ND	2.000000 ug/L	<rl< td=""><td></td></rl<>	
Cadmium	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Calcium	[33.700]		<rl< td=""><td></td></rl<>	
Chromium	ND	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Cobalt	ND	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Copper	ND	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Iron	[18.800]		<rl< td=""><td></td></rl<>	
Lead	ND	3.000000 ug/L	<rl< td=""><td></td></rl<>	
Magnesium	[20.990]		<rl< td=""><td></td></rl<>	
Manganese	ND	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Molybdenum	[5.4500]		<rl< td=""><td></td></rl<>	
Nickel	ND	20.00000 ug/L	<rl< td=""><td></td></rl<>	
Selenium	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Silver	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Thallium	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Titanium	[1.5800]	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Vanadium	ND	10.00000 ug/L	<rl< td=""><td></td></rl<>	
Zinc	ND	20.00000 ug/L	<rl< td=""><td></td></rl<>	
			7274	

CONTINUING CALIERATION REPORT Curtis & Tompkins Laboratories

IDF : 1.0

Instid : MET07 Run Name : Seqnum : 74310009026 Filename : tr243964

Injected: 02-AUG-2004 08:57

Caltype :

Standards: 04WS1319

Analyte RF/G	CF SpkAmt	QuantAmt	Units	. 14%	Max %D I	Elace
Aluminum		771.9000		3	10	rage
Antimony	750.0000	762.0000	ug/L	2	10	
Arsenic	375.0000	374.0000	ug/L	0	10	
Barium		740.0000		-1	10	
Beryllium		74.20000		-1	10	
Cadmium		74.20000		-1	10	
Calcium	1500.000	1494.000	ug/L	0	10	
Chromium	150.0000	150.0000	ug/L	0	10	
Cobalt	375.0000	363.0000	ug/L	-3	10	
Copper	150.0000	152.0000	ug/L	1	10	
Iron	750.0000	730.0000	ug/L	-3	10	
Lead	375.0000	371.0000	ug/L	-1	10	
Magnesium	1500.000	1517.000	ug/L	1	10	
Manganese		72.70000		-3	10	
Molybdenum		751.0000		0	10	
Nickel		370.0000		-1	10	
Selenium		370.0000		-1	10	
Silver		75.20000		0	10	
Thallium		362.0000		-3	10	
Titanium		753.0000		0	10	
Vanadium		369.0000		-2	10	
Zinc	75.00000	74.60000	ug/L	-1	10	

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Seqnum: 74310009027 Run Name: Filename: tr243965 Run Type:

Run Type: CCB

Injected: 02-AUG-2004 09:00

Analyte	QuantAmt		Units	Req Flac	JS .
Aluminum	ND	.00.0000	ug/L	<rl< td=""><td></td></rl<>	
Antimony	ND	€0.00000	ug/L	<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000	ug/L	<rl< td=""><td>1</td></rl<>	1
Barium	ND	10.00000	ug/L	<rl< td=""><td></td></rl<>	
Beryllium	ND	2.000000	ug/L	<rl< td=""><td></td></rl<>	
Cadmium	ND	5.00000	ug/L	<rl< td=""><td></td></rl<>	
Calcium	[33.980]	500.0000	ug/L	<rl< td=""><td></td></rl<>	
Chromium	ND	1.0.00000	ug/L	<rl< td=""><td></td></rl<>	
Cobalt	ND	10.00000	ug/L	<rl< td=""><td></td></rl<>	
Copper	ND	10.00000	ug/L	<rl< td=""><td></td></rl<>	
Iron	[38.180]	1.00.0000	ug/L	<rl< td=""><td></td></rl<>	
Lead	ND	1.000000	ug/L	<rl< td=""><td></td></rl<>	
Magnesium	[21.410]	500.0000	ug/L	<rl< td=""><td></td></rl<>	
Manganese	[0.4570]	10.00000	ug/L	<rl< td=""><td></td></rl<>	
Molybdenum	[5.5600]	20.00000		<rl< td=""><td></td></rl<>	
Nickel	ND	20.00000		<rl< td=""><td></td></rl<>	
Selenium	ND	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Silver	ND	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Thallium	ND	! .000000	ug/L	<rl< td=""><td></td></rl<>	
Titanium	[2.3100]	10.00000		<rl< td=""><td></td></rl<>	
Vanadium	ND	:0.00000		<rl< td=""><td></td></rl<>	
Zinc	ND	20.00000	ug/L	<rl< td=""><td></td></rl<>	

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Segnum : 74310009038

Run Name :

Filename : tr::43976

IDF : 1.0 Injected : 02-AUG-2004 09:52

Caltype :

Standards: 04WS1317

Analyte RF/CF	Co leases	0				123	
Aluminum	SikAmt	QuantAmt	Units	%D I	Max %D		
Antimony	5(0.0000	567.2000	ug/L	13	10	C+	* *
Arsenic	0.000	508.0000	ug/L	2	10		
Barium	2:0.0000	254.0000	ug/L	2	10		
Beryllium	5(0.0000	494.0000	ug/L	-1	10		
Cadmium	50.00000	49.70000	ug/L	-1	10		
Calcium	50.00000	50.90000	ug/L	2	10		
	1(00.000	1022.000	ug/L	2	10		
Chromium	1(0.0000	101.0000	ug/L	1	10		
Cobalt	250.0000	244.0000	ug/L	-2	10		
Copper	100.0000	101.0000	ug/L	1	10		
Iron	500.0000	555.9000	ug/L	11	10	C+	**
Lead	250.0000	251.0000	ug/L	0	10		
Magnesium	1000.000	1041.000	ug/L	4	10		
Manganese	50.00000	49.80000	uq/L	0	10		
Molybdenum	500.0000	499.0000	uq/L	0	10		
Nickel	250.0000	252.0000	uq/L	1	10		ļ
Selenium	250.0000	247.0000	ug/L	-1	10		
Silver	50.00000	49.50000	ua/L	-1	10		
Thallium	250.0000	238.0000	ug/L	-5	10		
Titanium	500.0000	508.0000	ug/L	2	10		
Vanadium	250.0000	246.0000	ug/L	-2	10		
Zinc	50.00000	52.10000	ug/L	4	10		

INSTRUMENT BLANK REPORT Curtis & Tompkins Laboratories

Instrument: MET07 TJA Trace ICP

Segnum: 74310009039 Run Name: Injected: 02-AUG-2004 09:56

Filename: tr243977 Run Type: CCB

Analyte	QuantAmt	₹L	Units	Req Flags
Aluminum	ND	100.0000	ug/L	<rl< td=""></rl<>
Antimony	ND	50.00000	ug/L	<rl< td=""></rl<>
Arsenic	ND	5.000000	ug/L	<rl< td=""></rl<>
Barium	ND	L0.00000	ug/L	<rl< td=""></rl<>
Beryllium	ND	2.000000	ug/L	<rl< td=""></rl<>
Cadmium	ND	5.000000	ug/L	<rl< td=""></rl<>
Calcium	[31.760]	500.0000	ug/L	<rl< td=""></rl<>
Chromium	ND	10.00000	ug/L	<rl< td=""></rl<>
Cobalt	ND	LO.00000	ug/L	<rl< td=""></rl<>
Copper	ND	LO.00000	ug/L	<rl< td=""></rl<>
Iron	[38.090]	L00.0000	ug/L	<rl< td=""></rl<>
Lead	[2.0500]	3.000000	ug/L	<rl< td=""></rl<>
Magnesium	[19.490]	500.0000	ug/L	<rl< td=""></rl<>
Manganese	[0.5550]	L0.00000	ug/L	<rl< td=""></rl<>
Molybdenum	[4.5500]	20.00000	ug/L	<rl< td=""></rl<>
Nickel	ND	20.00000	ug/L	<rl< td=""></rl<>
Selenium	ND	5.000000	ug/L	<rl< td=""></rl<>
Silver	ND	5.000000	ug/L	<rl< td=""></rl<>
Thallium	ND	5.000000	ug/L	<rl< td=""></rl<>
Titanium	[3.1000]	L0.00000	ug/L	<rl< td=""></rl<>
Vanadium	ND	L0.00000	ug/L	<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

CONTINUING CALIFRATION REPORT Curtis & Tompkirs Laboratories

IDF : 1.0

Instid : MET07 Run Name : Seqnum : 74310009050 Filename : tr243988 Injected: 02-AUG-2004 11:27

Caltype :

Standards: 04WS1319

Analyte	RF/CF SrkAmt	QuantAmt	Units	%D	Max %D	Flags
Aluminum	750.0000	748.1000		0	10	
Antimony		744.0000		-1	10	
Arsenic		369.0000		-2	10	
Barium	750.0000	722.0000	ug/L	-4	10	
Beryllium		73.10000		-3	10	
Cadmium	75.00000	73.90000	ug/L	-1	10	
Calcium	1500.000	1440.000	ug/L	-4	10	
Chromium	150.0000	147.0000	ug/L	-2	10	
Cobalt		357.0000		- 5	10	
Copper	150.0000	146.0000	ug/L	-3	10	
Iron	750.0000	710.7000	ug/L	-5	10	
Lead	375.0000	366.0000	ug/L	-2	10	
Magnesium		1564.000		4	10	
Manganese		70.70000		-6	10	
Molybdenum		729.0000		-3	10	
Nickel		367.0000		-2	10	
Selenium		364.0000		-3	10	
Silver	75.00000	72.40000	ug/L	-3	10	
Thallium		355.0000		- 5	10	
Titanium		736.0000		-2	10	
Vanadium		358.0000		- 5	10	
Zinc	75.00000	74.90000	ug/L	0	10	

INSTRUMENT BLANK REPORT Curtis & Tompkin: Laboratories

Instrument: MET07 TJA Trace ICP

Segnum: 74310009051 Run Name: Injected: 02-AUG-2004 11:32

Filename: tr243989 Run Type: CCB

Analyte	QuantAmt	₹L	Units	Req Flags	\neg
Aluminum	ND	100.0000	ug/L	<rl< td=""><td></td></rl<>	
Antimony	ND	50.00000	ug/L	<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Barium	ND	L0.00000	ug/L	<rl< td=""><td></td></rl<>	
Beryllium	[0.4180]	3.000000	ug/L	<rl< td=""><td></td></rl<>	
Cadmium	ND	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Calcium	[28.790]	500.0000	ug/L	<rl< td=""><td></td></rl<>	
Chromium	ND	L0.00000	\mathtt{ug}/\mathtt{L}	<rl< td=""><td></td></rl<>	
Cobalt	ND	L0.00000		<rl< td=""><td></td></rl<>	
Copper	ND	L0.00000	ug/L	<rl< td=""><td></td></rl<>	
Iron	[28.590]			<rl< td=""><td></td></rl<>	
Lead	[2.8900]			<rl< td=""><td></td></rl<>	
Magnesium	[56.440]	500.0000	ug/L	<rl< td=""><td></td></rl<>	
Manganese	ND	L0.00000		<rl< td=""><td></td></rl<>	
Molybdenum	[2.9800]			<rl< td=""><td></td></rl<>	
Nickel	ND	20.00000		<rl< td=""><td></td></rl<>	
Selenium	ND	5.000000		<rl< td=""><td></td></rl<>	
Silver	ND	5.000000		<rl< td=""><td></td></rl<>	
Thallium	ND	5.000000		<rl< td=""><td></td></rl<>	
Titanium	[1.9500]			<rl< td=""><td></td></rl<>	
Vanadium	ND	L0.00000		<rl< td=""><td></td></rl<>	
Zinc	ND	30.00000	ug/L	<rl< td=""><td></td></rl<>	

CONTINUING CALIERATION REPORT Curtis & Tompkins Laboratories

IDF : 1.0 Injected : 02-AUG-2004 12:26

Caltype :

Standards: 04WS1318

Analyte RF/CF	COLOR DE COMPANIE DE LA COLOR DE COLOR	QuantAmt		%D Ma:	€ %D	Flags
Aluminum		246.7000		-1	10	· · · · · · ·
Antimony	25).0000	251.0000	ug/L	0	10	
Arsenic	125.0000	125.0000	ug/L	0	10	
Barium	25).0000	243.0000	ug/L	-3	10	
Beryllium	25.00000	24.70000	uq/L	-1	10	
Cadmium	25.00000	25.20000	ug/L	1	10	
Calcium	50).0000	564.0000	uq/L	13	10	C+ **
Chromium	50.00000	49.60000	uq/L	-1	10	
Cobalt	125.0000	120.0000	ug/L	-4	10	
Copper	50.00000	49.30000	ug/L	-1	10	
Iron	25).0000	242.6000	ug/L	-3	10	
Lead	125.0000	124.0000	ug/L	-1	10	
Magnesium	50).0000	512.0000	ug/L	2	10	
Manganese	25.00000	23.90000	ug/L	-4	10	
Molybdenum	25).0000	247.0000	ug/L	-1	10	
Nickel	125.0000	124.0000	ug/L	-1	10	
Selenium	125.0000	126.0000	ug/L	1	10	
Silver	25.00000	24.00000	ug/L	-4	10	
Thallium	125.0000	120.0000	ug/L	-4	10	
Titanium	25).0000	247.0000	ug/L	-1	10	
Vanadium	125.0000	120.0000	ug/L	-4	10	
Zinc	25 00000	25.10000	ug/L	0	10	

INSTRUMENT BLANK REPORT Curtis & Tompkin; Laboratories

Instrument: MET07 TJA Trace ICP

Seqnum: 74310009063 Run Name: Filename: tr244001 Run Type: CCB

Injected: 02-AUG-2004 12:29

Analyte	QuantAmt	₹L Units	Reg Flags	
Aluminum	ND	.00.0000 ug/L	<rl< td=""><td></td></rl<>	
Antimony	ND	50.00000 ug/L	<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Barium	ND	_0.00000 ug/L	<rl< td=""><td></td></rl<>	
Beryllium	[0.6110]	3.000000 ug/L	<rl< td=""><td></td></rl<>	
Cadmium	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Calcium	[67.900]	500.0000 ug/L	<rl< td=""><td></td></rl<>	
Chromium	ND	.0.00000 ug/L	<rl< td=""><td></td></rl<>	
Cobalt	ND	.0.00000 ug/L	<rl< td=""><td></td></rl<>	
Copper	ND	.0.00000 ug/L	<rl< td=""><td></td></rl<>	
Iron	[22.470]		<rl< td=""><td></td></rl<>	
Lead	[1.5300]	3.000000 ug/L	<rl< td=""><td></td></rl<>	
Magnesium	[25.630]	500.0000 ug/L	<rl< td=""><td></td></rl<>	
Manganese	ND	.0.00000 ug/L	<rl< td=""><td></td></rl<>	
Molybdenum	ND	30.00000 ug/L	<rl< td=""><td></td></rl<>	
Nickel	ND	30.00000 ug/L	<rl< td=""><td></td></rl<>	
Selenium	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Silver	ND	5.000000 ug/L	<rl< td=""><td></td></rl<>	
Thallium	ND	5.000000 ug/L	<rl< td=""><td>1</td></rl<>	1
Titanium	[1.8700]		<rl< td=""><td>1</td></rl<>	1
Vanadium	ND	.0.00000 ug/L	<rl< td=""><td></td></rl<>	
Zinc	ND	20.00000 ug/L	<rl< td=""><td></td></rl<>	

INTERFERENCE CHECK STANDARD AB Curtis & Tompkins Laboratories

Instid : MET07 Run Name : Seqnum : 74310009073 Filename : tr244011 Injected: 02-AUG-2004 13:13

Caltype :

S	tandards	: 0	4WS	12	56

Analyte	SpkAmt	QuantAmt	Units	%D	Max %D Flags	
Aluminum	500000.0	483900.0	ug/L	- 3		<u> </u>
Antimony	500.0000	501.0000	ug/L	0	20	
Arsenic	500.0000	488.0000	ug/L	-2	20	
Barium	500.0000	458 0000	ug/L	-8	20	
Beryllium	500.0000	144 0000	ug/L	-11		
Cadmium	1000.000	275 0000	ug/L		20	
Calcium	500000.0	101400	ug/ь	-13	20	
Chromium	500000.0	101400.0	ug/L	-20		
Cobalt	500.0000	133.0000	ug/L	-13	20	
Copper	500.0000	431.0000	ug/L	-14	20	
Iron	500.0000	159.0000	ug/L	- 8	20	
Lead	200000.0	154700.0	ug/L	-23		
	1000.000	390.0000	ug/L	-11	20	
Magnesium	500000.0	192800.0	uq/L	- 1		
Manganese	500.0000	115.0000	ug/L	-17	20	
Molybdenum	500.0000	153.0000	ug/I	- 9	20	
Nickel	1000.000	348,0000	ug/L	-15	20	
Selenium	500.0000	183.0000	ug/L	-3		
Silver	1000.000	798 0000	ug/L	-20		
Thallium	500.0000	161 0000	ug/L		20	
Titanium	20000.00	19400 00	ug/11	-8	20	
Vanadium	500 0000	120 0000	ug/ь	-3		
Zinc	500.0000	±30.0000	ug/L	-14	20	
	1000.000	367.0000	ug/L	-3	20	

CONTINUING CALIBRATION REPORT Curtis & Tompkins Laboratories

Instid : MET07 Run Name : Seqnum : 74310009074 Filename : tr214012 IDF : 1.0 Injected : 02-AUG-2004 13:21

Caltype :

Standards: 04WS1317

71	PD/GD G3				
Analyte	RF/CF Sp cAmt	QuantAmt			Max %D Flags
Aluminum		528.5000		6	10
Antimony		499.0000		0	10
Arsenic		250.0000		0	10
Barium	50).0000	487.0000	ug/L	-3	10
Beryllium	50.00000	48.60000	ug/L	-3	10
Cadmium	50.00000	50.00000	ug/L	0	10
Calcium	10)0.000	965.6000	ug/L	-3	10
Chromium	10).0000	97.70000	ug/L	-2	10
Cobalt	25).0000	236.0000	ug/L	-6	10
Copper		95.90000		-4	10
Iron		479.5000		-4	10
Lead		246.0000		-2	10
Magnesium		1018.000		2	10
Manganese	50.00000	46.60000	ug/L	-7	10
Molybdenum	50).0000	497.0000	ug/L	-1	10
Nickel	25).0000	245.0000	uq/L	-2	10
Selenium	25).0000	248.0000	uq/L	-1	10
Silver		47.00000		-6	10
Thallium		246.0000		-2	10
Titanium		489.0000		-2	10
Vanadium		236.0000		-6	10
Zinc	50.00000	50.70000	ug/L	1	10

INSTRUMENT BLINK REPORT Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Segnum: 74310009075

Run Name:

Filename: tr244013

Run Type: CCB

Injected: 02-AUG-2004 13:25

Aluminum ND 00.0000 ug/L <rl< th=""> Antimony ND 60.00000 ug/L <rl< td=""> Arsenic ND 9.000000 ug/L <rl< td=""> Barium ND 10.00000 ug/L <rl< td=""> Beryllium [0.9480] .000000 ug/L <rl< td=""> Cadmium ND 9.000000 ug/L <rl< td=""> Calcium [29.340] .00.0000 ug/L <rl< td=""> Chromium ND 10.00000 ug/L <rl< td=""> Chromium ND 10.00000 ug/L <rl< td=""> Cobalt ND 10.00000 ug/L <rl< td=""> Copper ND 10.00000 ug/L <rl< td=""> Iron [26.980] .00.0000 ug/L <rl< td=""> Iron [26.980] .00.0000 ug/L <rl< td=""> Magnesium [37.170] .00.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [3.5900] .0.00000 ug/L <rl< td=""> Nickel ND .000000 ug/L <rl< td=""> Selenium ND .000000 ug/L <rl< td=""> Silver ND .0000000 ug/L <rl< td=""> Titanium</rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>	Analyte	QuantAmt		Units	Req Flags
Arsenic ND		ND			<rl< td=""></rl<>
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	l t	ND	10.00000	ug/L	
	Zinc	ND	:0.00000	ug/L	<rl< td=""></rl<>

ber : 93374 Analysi Agted: 02-AUG-2004 By : Victor Vergara Units	Curtis & Tompkins Laboratories	Sample Preparation Summary	02-
lod : 3050 Clean-U	: 93374 d: 02-AUG-2004 : Victor Vergara : 3050	alysis : N/A group : ICA nits : g ean-up :	

02-AUG-2004 07:44

UUU

Sample Type	C11	Client	Macrix	M/M Tuic	Unics	Units Final Prep Vol D.F.	Prep Crean pH Sp 1 Sp 2 D.F. D.F. Vol Vol	T ds H		Vol Vol	Me CI	Method Com	Comments
173724-002	Inr	Innovative Technical Solutions	Soil	1.15	9	50	78261			T26/ICP			
173727-001	CH2	CH2M Hill Constructors Inc.	Soil		g	50	50.000000 1			T26/ICP			
173729-001	CH2	CH2M Hill Constructors Inc.	Soil	1.26	g	50	39.682540 1			PB			
173729-002	CH2	CH2M Hill Constructors Inc.	Soil	1.15	g	50	43.478261 1			PB			
173729-003	CH2M	M Hill Constructors Inc.	Soil	1.03	Ф	50	48.543689 1			PB			
173729-004	CH2M	M Hill Constructors Inc.	Soil	. 98	g	50	51.020408 1			PB		me	mss
173729-005	CH2	CH2M Hill Constructors Inc.	Soil	1	Ω	50	50.000000 1			PB			
173729-007	CH2M	M Hill Constructors Inc.	Soil	1.05	В	50	47.619048 1			РВ			
173729-008	CH2M	M Hill Constructors Inc.	Soil	. 98	Э	50	51.020408 1			Bd			
173730-001	CH2M	M Hill Constructors Inc.	Soil	1.24	Ф	50	40.322581 1			Bd			
173730-002	CH2M	M Hill Constructors Inc.	Soil	1.04	g	50	48.076923 1			₽B			
173730-003	CH2M	M Hill Constructors Inc.	Soil	1.51	В	50	33.112583 1			Bd			
173730-004	CH2	CH2M Hill Constructors Inc.	Soil	.98	В	50	51.020408 1			₽B			
173730-005	CH2	CH2M Hill Constructors Inc.	Soil	1.16	Э	50	43.103448 1			₽B			
173741-001	Tre	Treadwell & Rollo	Soil	1.03	g	50	48.543689 1			T26/ICP			
173746-005	Geo	Geologica	Soil	1.08	д	50	46.296296 1			Вď			
173746-010	Geo	Geologica	Soil	. 9	Э	50	55.555556 1			PB			
172746-015	UB.	reol or ina	Soil	1 . 00	3	20	49.019608 1			PB			
QC259725 BLANK			Soil	۲	g	50	50.000000 1			ICAP			
QC259726 BS			Soil	1	9	50	50.000000 1	5	Ġ	ICAP			
QC259727 BSD			Soil	_	g	50	50.000000 1	Մ	5	ICAP			
QC259728 MS	of 173729-004		Soil	1.07	Ф	50	46.728972 1	თ	ज	ICAP			
QC259729 MSD	of 173729-004		Soil	_	g	50	50.000000 1	5	5	ICAP			
QC259730 SER	of 173729-004		Soil	. 98	g	50	51.020408 1			ICAP			

Prep Chemist:_

Relinquished By:

Received By:

Reviewed By:

Date

Date:

8702/sy

LIMS Batch #: 93374	Digestion Method	BK 1971
Date Digested: 42004	№ EPA 3050b	Page 20
Digested by:	<u> </u>	U

	Weight of	Final	Filter	ed?
Sample # and letter	Sample (g)	Volu ne (mL)	(y/n)	Comments
BIL-QC 259725	Ø	150.0	Y	
* BS 1 259776				
* BSD * 259727	4			
2 1739 29-004 WB A	1.07			
A DOMMSO	1-00			
173724-002	1.15			COWP 8 Jars.
173727-001 A	1-00	<u>.</u>		
173729-001 A	1.26			
002	1.15			
10 503	1.03			
-004 A	0.98	<u> </u>		MSS
- 005	1,20			
-007	1.05	<u> </u>		
1000	098			
15 173730-001 A	1-24	<u> </u>		
1 002	194			
003	1.51			
400-7	0.98	<u> </u>		
4 - 005	1.16			
20 173741.001 A	1-03			
173746-005	1.98			6ml 1-4
- 010	0-90	<u> </u>	$\bot \bot \bot$	6-9
015	1-02	 		11-14
		<u> </u>		

00	Reagent ID or LIMS #	Initials / Date
mL of spike solution was added to all spikes	0455/317	V V 8/2/04
	OKS112*	
digestion temperature (90 - 95 c egrees C)	95°C	
:1 HNO3	A02056-072604	
concentrated HNO3	A02056- 17 Baker	
3mL 30% hydroger peroxide	43287349- V.W.Y	
concent ated HCl	A16039, 7+Baker	
filtered thru' What nan # 541	E1566057	-

Extraction Chemist / Date

Continued from page _____

Reviewed by / Date

Percent Moisture Summary Report

Batch: 93392 Date: 08/03/04 Method: CLP SOW 390 Analyst: RSM

				Percent	Percent	
Sample	Tare (g)	Wet (g)	Dry (g)	Solids	Moisture	
173727-001	15.2294	22.4204	21.6453	89	11	
173729-001	15.4317	22.4207	22.1932	97	3	
173729-002	15.3271	22.2482	21.6695	92	8	
173729-003	15.4943	22.4692	21.7962	90	10	
173729-004	15.7100	22.3907	21.9146	93	7	1
173729-005	15.3473	22.4578	21.5786	88	12	
173729-007	15.4846	22.6869	22.1945	93	7	į
173729-008	15.2227	22.3090	21.8210	93	7	
173730-001	15.5157	22.4736	21.7048	89	11	
173730-002	15.3593	22.4216	21.2084	83	17	
173730-003	15.2170	22.5534	21.7561	89	11	
173730-004	15.4820	22.3103	21.2718	85	15	
173730-005	15.6487	22.7086	21.6918	86	14	
173746-005	15.2929	22.7366	22.5775	98	2	
173746-010	15.2803	22.5691	22.4162	98	2	
173746-015	15.4570	22.4135	22.2273	97	3	
QC259805	15.3801	22.3421	22.1152	97	3	
of 173729-001			RPD	0.0%	0.1%	

APPENDIX B DataVal, Inc. Quality Control Summary Report

TO: Brian Aubry, Geologica Inc. August 11, 2004

FROM: Donna Breaux, DataVal, Inc. Geologica Inc. Project No. Presidio.001

QUALITY CONTROL SUMMARY REPORT FOR THE GA-9 STOCKPILE SITE, THE PRESIDIO OF SAN FRANCISCO, CA

LABORATORY: Curtis & Tompkins, Berkeley, CA

LABORATORY SAMPLE DELIVERY GROUP: 173746

SAMPLING DATE: July 30, 2004

Data validation of a Level III laboratory data package was performed according to the project-specific guidelines. These guidelines were outlined in the Presidio-wide Quality Assurance Project Plan, Sampling and Analysis Plan, April, 2001; the U. S. Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Organic Data Review, October, 1999; and the U. S. Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, July 2002.

The data were reviewed for holding times, blanks, initial calibrations, continuing calibration verification (CCV) standards, laboratory control samples (LCS), surrogate recoveries, matrix spikes (MS), matrix spike duplicates (MSD), ICP interference check standards, ICP serial dilutions, and field duplicate samples.

The following paragraphs highlight the essential findings of the data validation effort:

I. <u>Total Petroleum Hydrocarbons - TPH-Gasoline Range (8015B)</u>
 Overall, the data are usable as reported. Qualification was not required.

A. Reporting Limits

The laboratory reporting limit for TPH-gasoline in soil matrix samples met the project required reporting limit, with the following exception:

1. The reporting limits for all soils were raised due to dry weight correction.

B. <u>Holding Times</u>

Technical holding time criteria were met for all project samples.

C. Blanks

Target analytes were not observed in any laboratory method blanks associated with the project samples.

D. <u>Initial Calibration</u>

Initial calibration criteria were met for all calibration standards associated with the project samples.

E. Continuing Calibration

Continuing calibration criteria were met for all continuing calibration standards associated with the project samples.

F. Matrix Spike/Matrix Spike Duplicate

All QC criteria were met for the matrix spike and matrix spike duplicate associated with the project samples.

G. <u>Laboratory Control Samples</u>

All QC criteria were met for the laboratory control sample associated with the project samples.

H. Surrogate Recoveries

Surrogate spike recoveries met QC acceptance criteria for all project samples.

II. <u>Total Petroleum Hydrocarbons – TPH-Diesel/TPH-Motor Oil Range (8015B)</u>

Overall, the data are usable as reported with any added qualifiers. Qualification was required for the reason noted in Section H.

A. Reporting Limits

The laboratory reporting limits for TPH-diesel and TPH-motor oil in soil matrix samples met the project required reporting limits, with the following exception:

1. The reporting limits for all soils were raised due to dry weight correction.

B. Holding Times

Technical holding time criteria were met for all project samples.

C. Blanks

Target analytes were not observed in any laboratory method blanks associated with the project samples.

D. Initial Calibration

Initial calibration criteria were met for all calibration standards associated with the project samples.

E. Continuing Calibration

Continuing calibration criteria were met for all continuing calibration standards associated with the project samples.

F. <u>Matrix Spike/Matrix Spike Duplicate</u>

All QC criteria were met for the matrix spike and matrix spike duplicate associated with the project samples, with the following exception:

 The percent recoveries for diesel were outside the 65%-135% project acceptance criteria in the QC samples associated with QC batch 93369. The amount of diesel present in the parent sample was greater than four times the amount spiked, and the parent sample was associated with a site unrelated to the project site. The quality and usability of the project samples were not affected by this failed QC parameter.

G. Laboratory Control Samples

All QC criteria were met for the laboratory control sample associated with all project samples.

H. Surrogate Recoveries

Surrogate spike recoveries met QC acceptance criteria for all project samples, with the following exceptions:

 The percent recoveries for surrogate hexacosane were outside the 65%-135% project acceptance criteria in samples GA9SSCOMP501-504 at 56% and DUP073004COMP501-504 at 62%. The non-detected results for TPH-diesel and motor oil were qualified as estimated (UJ) in these samples.

See Table 2 of this report for a summary of qualifications due to surrogate recovery failure.

III. Aromatic Volatiles (BTEX) by GC (8021B)

Overall, the data are usable as reported. Qualification was not required.

A. Reporting Limits

The laboratory reporting limits for benzene, toluene, ethylbenzene and xylenes in soil matrix samples met the project required reporting limits, with the following exception:

1. The reporting limits for all soils were raised due to dry weight correction.

B. Holding Times

Technical holding time criteria were met for all project samples.

C. Blanks

Target analytes were not observed in any laboratory blanks associated with all project samples.

D. Initial Calibration

Initial calibration criteria were met for all calibration standards associated with the project samples.

E. Continuing Calibration

Continuing calibration criteria were met for all continuing calibration standards associated with the project samples.

F. Matrix Spike/Matrix Spike Duplicate

A matrix spike and matrix spike duplicate were not analyzed with the project samples for this method.

G. <u>Laboratory Control Samples</u>

All QC criteria were met for the laboratory control sample associated with the project samples.

H. <u>Surrogate Recoveries</u>

Surrogate spike recoveries met QC acceptance criteria for all project samples.

IV. Organochlorine Pesticides (8081A)

Overall, the data are usable as reported. Qualification was not required.

A. Reporting Limits

The laboratory reporting limits for pesticides met the project required reporting limits, with the following exceptions:

- 1. The reporting limits for all soils were raised due to dry weight correction.
- The laboratory reporting limit for toxaphene did not meet the project required reporting limit listed in Table 2-6.5-1 of the QAPP. The laboratory reported 60 ug/kg for toxaphene. The project required reporting limit was 40 ug/kg.

B. Holding Times

Technical holding time criteria were met for all project samples.

C. Blanks

Target analytes were not observed in any laboratory method blanks associated with the project samples.

D. Initial Calibration

Initial calibration criteria were met for all calibration standards associated with the project samples. When data from two columns was presented and one had acceptable percent relative standard deviations and the other did not, it was assumed that the column in control was used by the laboratory for reporting.

E. <u>Continuing Calibration</u>

Continuing calibration criteria were met for all continuing calibration verification standards associated with the project samples.

F. Surrogate Recoveries

Surrogate spike recoveries met QC acceptance criteria for all project samples.

G. Laboratory Control Samples

All QC criteria were met for the laboratory control sample associated with the project samples.

H. Matrix Spike/Matrix Spike Duplicate

A matrix spike and matrix spike duplicate were not analyzed with the project samples for this method.

I. Performance Evaluation Mix (PEM) Check Standards

All PEM check standards met the project degradation criteria of 20% for endrin and 4,4'-DDT.

V. Polychlorinated Biphenyls (PCBs) (8082)

Overall, the data are usable as reported. Qualification was not required.

A. Reporting Limits

The laboratory reporting limits for PCBs in soil matrix samples met the project required reporting limits, with the following exception:

1. The reporting limits for all soils were raised due to dry weight correction.

B. Holding Times

Technical holding time criteria were met for all project samples.

C. Blanks

Target analytes were not observed in any laboratory method blanks associated with the project samples.

D. Initial Calibration

Initial calibration criteria were met for all calibration standards associated with the project samples.

E. Continuing Calibration

Continuing calibration criteria were met for all continuing calibration verification standards associated with the project samples.

F. Surrogate Recoveries

Surrogate spike recoveries met QC acceptance criteria for all project samples.

G. Laboratory Control Samples

All QC criteria were met for the laboratory control samples associated with the project samples.

H. Matrix Spike/Matrix Spike Duplicate

A matrix spike and matrix spike duplicate were not analyzed with the project samples for this method.

VI. Total Lead (6010B)

Overall, the data are usable as reported. Qualification was not required.

A. Reporting Limits

The laboratory reporting limit for lead in soil matrix samples met the project required reporting limit, with the following exception:

1. The reporting limits for all soils were raised due to dry weight correction.

B. Holding Times

Technical holding time criteria were met for all project samples.

C. Blanks

Target analytes were not observed in the laboratory method blank associated with the project samples.

D. Initial and Continuing Calibrations

All initial and continuing calibration standards associated with the project samples met QC acceptance criteria.

E. Matrix Spike/Matrix Spike Duplicate

All QC criteria were met for the matrix spike and matrix spike duplicate associated with the project samples.

F. Laboratory Control Samples

All QC criteria were met for the laboratory control sample associated with the project samples.

G. ICP Interference Check Standards

All QC criteria were met for the ICP interference check standards associated with the project samples.

H. ICP Serial Dilution

All QC criteria were met for the ICP serial dilutions associated with the project samples.

The following paragraphs highlight the essential findings of the field duplicate samples:

Field duplicate precision was evaluated by calculating the relative percent difference (RPD) between detected results in the original sample and its associated duplicate. The control limit used for field duplicates was a relative percent difference less than or equal to 50 percent, or the absolute difference of the two results must be less than twice the reporting limit for those analytes that were at or near the detection limit. One soil sample was collected in duplicate for the GA-9 Stockpile sampling event.

Project Sample	Lab Sample	Project Sample	Lab Sample
Primary ID	ID	Duplicate ID	ID
GA9SSCOMP501-504	173746-005	DUP073004COMP501-504	173746-010

The attached Table 3 summarizes the field duplicate sample results. The detected results of the original sample and the associated duplicate sample were compared and the calculated RPDs reported.

All RPDs met the 50 percent (or +/- 2XRL) precision control limit requirement.

SUMMARY

The attached Table 1 lists the project samples and the respective analyses that were included in the data validation effort. The attached Table 2 summarizes the data qualifications required for the project samples for each test method included in the data package. The attached Table 3 summarizes the field duplicate sample results.

USABILITY

The quality control criteria were reviewed, and other than those discussed above, all criteria were met and the data are considered acceptable. Estimated sample results (J/UJ) are usable only for limited purposes. Based upon the cursory data validation, all other results are considered valid and usable for all purposes.

VALIDATION QUALIFIERS IDENTIFICATION

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October, 1999.

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Table 1 Sample Summary GA-9 Stockpile Site The Presidio of San Francisco, CA

Site	Lab	Date		Sample
Sample ID	Sample ID	Sampled	Analyses	Type
CAOSSCOMPEGA FOA	470746 005	20 1 04	TPH-Gasoline (8015B), TPH-Diesel/MO (8015B), BTEX (8021B), Pesticides (8081A),	Coil (1)
GA9SSCOMP501-504	173746-005	30-Jul-04	PCBs (8082), Total Lead (6010B)	Soil (1)
			TPH-Gasoline (8015B), TPH-Diesel/MO (8015B), BTEX (8021B), Pesticides (8081A),	
DUP073004COMP501-504	173746-010	30-Jul-04	PCBs (8082), Total Lead (6010B)	FD (1)
			TPH-Gasoline (8015B), TPH-Diesel/MO (8015B), BTEX (8021B), Pesticides (8081A),	
GA9SSCOMP505-508	173746-015	30-Jul-04	PCBs (8082), Total Lead (6010B)	Soil

TPH: Total Petroleum Hydrocarbons

MO: Motor Oil

BTEX: Benzene, toluene, ethylbenzene, xylenes

PCBs: Polychlorinated Biphenyls

FD: Field duplicate of previous numbered sample, (1), (2), etc.

Table 2 Qualified Data Summary GA-9 Stockpile Site The Presidio of San Francisco, CA

Sample ID	Lab ID	Analysis Method	Compound	CAS Number	Qualifier	Reason
GA9SSCOMP501-504	173746-005	8015B	TPH-Diesel	68334-30-5	UJ	Surrogate percent recovery failure
GA9SSCOMP501-504	173746-005	8015B	TPH-Motor oil	0	UJ	Surrogate percent recovery failure
DUP073004COMP501-504	173746-010	8015B	TPH-Diesel	68334-30-5	UJ	Surrogate percent recovery failure
DUP073004COMP501-504	173746-010	8015B	TPH-Motor oil	0	UJ	Surrogate percent recovery failure

UJ: The quantitation limit is considered an estimated value for this non-detected analyte.

Table 3 Summary of Field Duplicates GA-9 Stockpile Site The Presidio of San Francisco, CA

Original Sample #	Lab ID	Matrix	Compound	Orig. Result	Duplicate Sample #	Lab ID	Dup. Result	RPD
GA9SSCOMP501-504	173746-005	Soil	TPH-Gasoline	ND	DUP073004COMP501-504	173746-010	ND	NA
GA9SSCOMP501-504	173746-005	Soil	TPH-Diesel	ND	DUP073004COMP501-504	173746-010	ND	NA
GA9SSCOMP501-504	173746-005	Soil	TPH-Motor oil	ND	DUP073004COMP501-504	173746-010	ND	NA
GA9SSCOMP501-504	173746-005	Soil	BTEX	ND	DUP073004COMP501-504	173746-010	ND	NA
GA9SSCOMP501-504	173746-005	Soil	Pesticides	ND	DUP073004COMP501-504	173746-010	ND	NA
GA9SSCOMP501-504	173746-005	Soil	PCBs	ND	DUP073004COMP501-504	173746-010	ND	NA
GA9SSCOMP501-504	173746-005	Soil	Total Lead	1.8 mg/kg	DUP073004COMP501-504	173746-010	1.6 mg/kg	12%

ND: Non-detected

NC: Not calculated. The absolute difference between the sample result and the duplicate sample result is less than the reporting limit.

NA: Not applicable. Calculation of the relative percent difference between the sample result and the duplicate sample result is not applicable.

PT_GA9_Table3_FDs 11



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 9471O, Phone (510) 486-0900

Laboratory Number 177403

Treadwell & Rollo 555 Montgomery Street San Francisco, CA 94111 Project#: 2893.12

Location: Presidio BB3

<u>Sample ID</u>	<u>Lab ID</u>
BB3-RA/B-A	177403-001
BB3-RA/B-B	177403-002
BB3-RA/B-C	177403-003
BB3-RA/B-D	177403-004
COMP BB3-RA/B	177403-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Operations Manager

_

ate: 2/19/05

Signature:

Project Manager

NELAP # 01107CA

Page 1 of



CASE NARRATIVE

Laboratory number: 177403

Client: Treadwell & Rollo

Project: 2893.12

Location: Presidio BB3

Request Date: 01/28/05 Samples Received: 01/28/05

This hardcopy data package contains sample and QC results for one four-point soil composite, requested for the above referenced project on 01/28/05. The samples were received intact at ambient temperature.

TPH-Extractables by GC (EPA 8015B):

Low recovery was observed for diesel C12-C24 in the MSD for batch 98754; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Metals (EPA 6010B):

Low recoveries were observed for a number of analytes in the MS/MSD of COMP BB3-RA/B (lab # 177403-005); the BS/BSD were within limits, and the associated RPDs were within limits. Response exceeding the instrument's linear range was observed for iron in the MS/MSD of COMP BB3-RA/B (lab # 177403-005). Low recovery was observed for antimony, barium, molybdenum, and zinc in the post digest spike for batch batch 98751. No other analytical problems were encountered.

Moisture (ASTM D2216/CLP):

No analytical problems were encountered.



Chain of Custody

SOP Volume:

Client Services

Section:

1.1.2

Page:

1 of 1

Effective Date:

10-May-99

Revision:

1 Number 1 of 3

Filename:

 $F:\QC\Forms\QC\Cooler.wpd$



COOLER RECEIPT CHECKLIST

Login#: 177403 Date Received: $1-28-05$ Number of Coolers:	
A. Preliminary Examination Phase Date Opened: 1-28-95 By (print): Toy Wind 50 (sign)	m (
1. Did cooler come with a shipping slip (airbill, etc.)?	
2. Were custody seals on outside of cooler? YES How many and where? Seal date: Seal name:	(40)
3. Were custody seals unbroken and intact at the date and time of arrival? YES	NO //
4. Were custody papers dry and intact when received?	NO .
5. Were custody papers filled out properly (ink, signed, etc.)?	NO
6. Did you sign the custody papers in the appropriate place?	NO
7. Was project identifiable from custody papers?	NO
If YES, enter project name at the top of this form.	
8 If required, was sufficient ice used? Samples should be 2-6 degrees C YES	NO.
Type of ice: None Temperature: Ambien + - Receiv	ed direct
from t	he field
Date Logged In: 1-28-05 By (print): Tray Windson (sign) Lung & MM	1/2
1. Describe type of packing in cooler: Tust the jars	
2. Did all bottles arrive unbroken?	
3. Were labels in good condition and complete (ID, date, time, signature, etc.)?YES	NO
4. Did bottle labels agree with custody papers?	NO
5 Were appropriate containers used for the tests indicated? (YFS)	NO .
6. Were correct preservatives added to samples? YES	NO/V(/)
7 Was sufficient amount of sample sent for tests indicated?	NO 1
8. Were bubbles absent in VOA samples? If NO, list sample Ids belowYES	NO N
9. Was the client contacted concerning this sample delivery? YES	NO
If YES, give details below.	
Who was called? By whom? Date:	
Additional Comments:	
	
Filename: F:\qc\forms\qc\cooler.doc Rev. 1, 4/9	5



Total Extractable Hydrocarbons Lab #: 177403 Location: Presidio BB3 Client: Treadwell & Rollo Prep: SHAKER TABLE Project#: 2893.12 Analysis: EPA 8015B Field ID: COMP BB3-RA/B Batch#: 98754 Matrix: Soil Sampled: 01/28/05 Units: mg/Kg Received: 01/28/05 Diln Fac: 1.000 Prepared: 01/31/05

Type: Lab ID: SAMPLE

177403-005

Basis:

dry

Moisture:

88

Analyzed: 02/14/05

Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C12-C24	220 H	1.1	
Motor Oil C24-C36	64 L	5.4	1

Surrogate	%REC	Limits	
Hexacosane	96	65-135	

Type: Lab ID: BLANK

QC281095

Analyzed:

01/31/05

Cleanup Method: EPA 3630C

Basis: as received

Analyte	Result	RL
Diesel C12-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate		Limits
Hexacosane	94	65-135

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Chromatogram

Sample Name: 177403-005sg,98754

FileName : G:\GC17\CHA\045A009.RAW

Method : ATEHO39.MT

Start Time : 0.01 min

Scale Factor: 0.0

: ATEH039.MTH

End Time : 19.99 min Plot Offset: 7 mV

Sample #: 98754

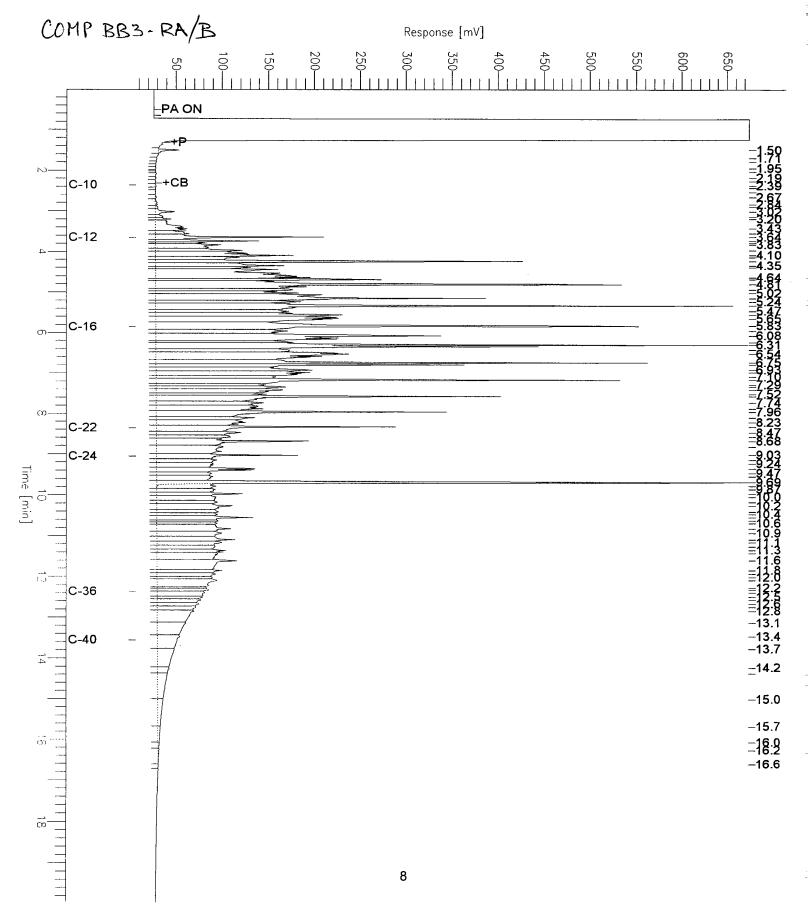
Date: 2/14/05 02:21 PM

Time of Injection: 2/14/05 01:54 PM

High Point : 674.65 mV

Page 1 of 1

Low Point : 6.80 mV Plot Scale: 667.8 mV



Chromatogram

Sample Name : ccv,05ws0171,dsl FileName : G:\GC15\CHB\030B004.RAW Method : BTEH031S.MTH

Start Time : 0.01 min

: 19.99 min End Time

Plot Offset: 23 mV

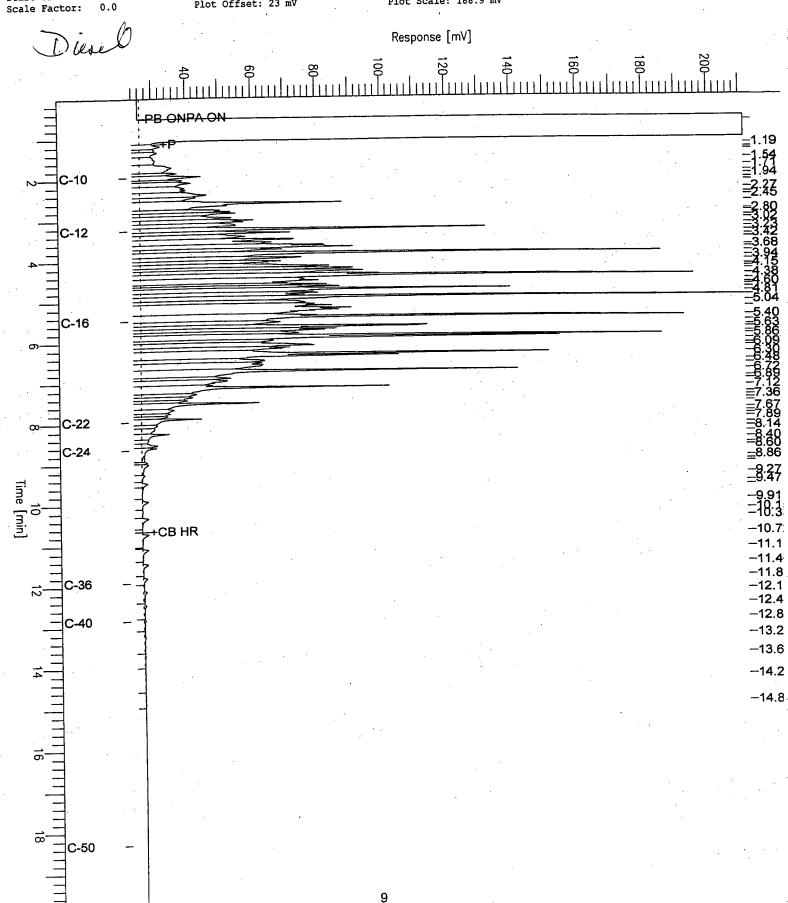
Sample #: 500mg/L Date : 1/31/05 08:42 AM

Time of Injection: 1/30/05 06:36 PM

Low Point : 22.57 mV High Point: 211.46 mV

Page 1 of 1

Plot Scale: 188.9 mV



Chromatogram

Sample Name : ccv,05ws0066,mo

: G:\GC15\CHB\030B003.RAW FileName

: BTEH031S.MTH Method

: 19.99 min End Time

Plot Offset: 19 mV

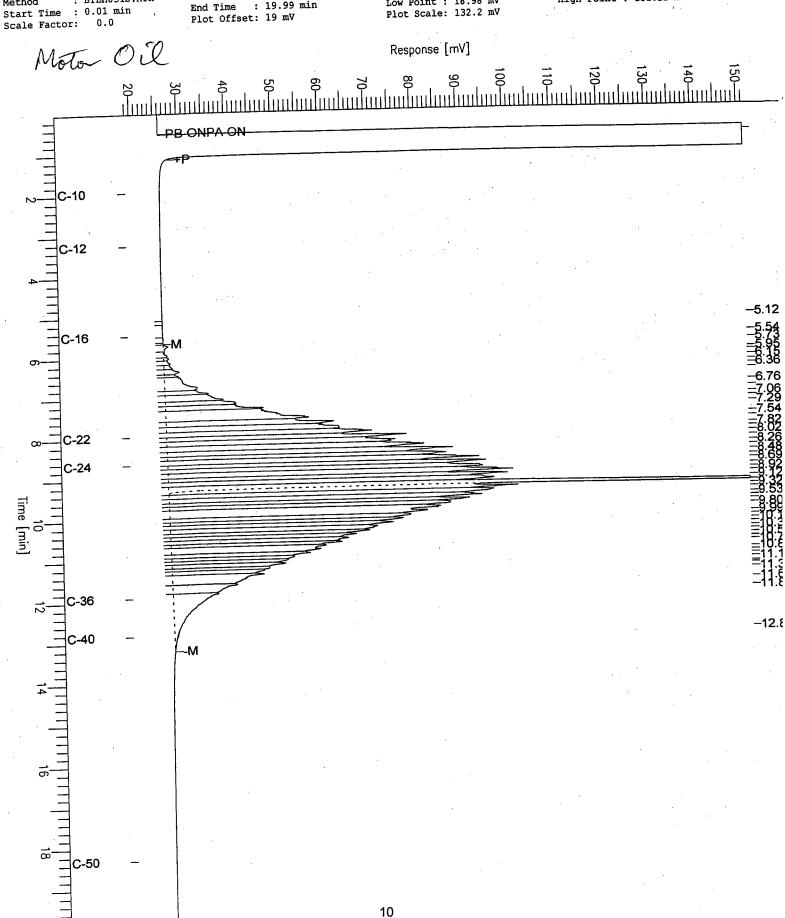
Sample #: 500mg/L Date: 1/31/05 08:40 AM

Time of Injection: 1/30/05

06:07 PM High Point : 151.22 mV

Page 1 of 1

Low Point: 18.98 mV Plot Scale: 132.2 mV





Batch QC Report

	Total Ext	actable Hydrocan	rbons
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	2893.12	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC281096	Batch#:	98754
Matrix:	Soil	Prepared:	01/31/05
Units:	mg/Kg	Analyzed:	01/31/05
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%RB(: Limits
Diesel C12-C24	49.96	60.77	122	65-135

Surrogate	*5KLL	Limits	
Hexacosane	94	65-135	



Batch QC Report

	Total Ext	ractable Hydrocar	bons
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	2893.12	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZ	Diln Fac:	3.000
MSS Lab ID:	177390-004	Batch#:	98754
Matrix:	Soil	Sampled:	01/27/05
Units:	mg/Kg	Received:	01/27/05
Basis:	as received	Prepared:	01/31/05

Type:

MS

Analyzed: 02/02/05

Lab ID:

QC281097

Analyte	MSS Result	Spiked	Result		EC Limits
Diesel C12-C24	41.66	49.97	74.26	65	65-135

Surrogate	%rec	Limits	
Hexacosane	73	65-135	

Type:

MSD

Analyzed:

02/01/05

Lab ID:

QC281098

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C12-C24	49.98	66.87	50 *	65-135	10	35

Surrogate	%REC	Limits
Hexacosane	69	65-135

^{*=} Value outside of QC limits; see narrative RPD= Relative Percent Difference Page 1 of 1

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Gas Chromatograph #11 (Channel A) TEH Reviewed By: MCH Name: dsl Type: (normal) Date: 06-DEC-2004 12:48 Inj Vol (uL): Instrument: GC11A

Calnum: 114491750001

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Calibration levels:

Analyzed Standards	2:48 04WS1748	3:18 04WS1747	3:47 04WS1221	4:16 04WS1745	4:46 04WS1744	5:15 04WS1743	5:44 04WS1742
Analyzed	06-DEC-2004 12:48 04WS1748	06-DEC-2004 13:18 04WS1747	06-DEC-2004 13:47 04WS1221	06-DEC-2004 14:16 04WS1745	06-DEC-2004 14:46 04WS1744	06-DEC-2004 15:15 04WS1743	06-DEC-2004 15:44 04WS1742
Samplenum	ds110	ds1100	ds1250	ds1500	ds11000	ds12500	ds15000
Segnum	114491750003	114491750004	114491750005	114491750006	114491750007	114491750008	114491750009
Filename Segnum	341a003	341a004	341a005	341a006	341a007	341a 008	341a009
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Instrument amount = a0 + response * a1 + response^2 * a2 AVRG: Average response factor

Page 1 of 1

Curves:

INITIAL CALIBRATION 2ND SOURCE VALIDATION SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Instid : GC11A

Calname : dsl

ICV 114491750011 (341a011) standards: 04WS2006

Analyte	Ch	ICV Seqrum	Date Spiked Quant Units %D
Diesel C12-C24	A	114491750011	06-DEC-2004 500.00 468.85 mg/L -6

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Gas Chromatograph #11 (Channel A) TEH Reviewed By: MCH Hexacosane Type: (normal) Date: 16-DEC-2004 12:04 Inj Vol (uL): 3 Instrument: GC11A

Name: Hexacosane Calnum: 114506134001

Calibration levels:

Standards	2:04 04WS2042	2:33 04WS2043	3:02 04WS2044	3:31 04WS2045	4:00 04WS2046
Analyzed	16-DEC-2004 12:04 04WS2042	16-DEC-2004 12:33 04WS2043	16-DEC-2004 13:02 04WS2044	16-DEC-2004 13:31 04WS2045	16-DEC-2004 14:00 04WS2046
Samplenum	hex5	hex10	hex25	hex50	hex75
Segnum	114506134002	114506134003	114506134004	114506134005	114506134006
Filename Segnum	351a002	351a003	351a004	351a005	351a006
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r^2 %RSD MnR^2 MxRSD Flags	0.995 20
$\Gamma^{\wedge} Z$ units avg %RSD (mg/L 29444 2 (
0 al a2 units	3.396E-5
Type X a0	4 AVRG R
11 12 13 14 15	29897 2950
13	29932
77	28377
L1 12 L3 L4 L5 Type X a	29511
Analyte L1 L2	Hexacosane

Instrument amount = a0 + response * a1 + response^2 * a2 AVRG: Average response factor

Page 1 of 1

Curves:

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Reviewed By: MCH TEH Gas Chromatograph #13 (Channel B) Instrument: GC13B

Date: 24-JAN-2005 12:48 Inj Vol (uL): Type: (normal) Name: dslical Calnum: 145035145001

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Calibration levels:

Standards 24-JAN-2005 13:16 04WS2299 04WS2300 24-JAN-2005 14:12 05WS0019 04WS2302 24-JAN-2005 12:48 04WS2298 24-JAN-2005 15:09 04WS2303 24-JAN-2005 15:37 04WS2297 24-JAN-2005 13:44 24-JAN-2005 14:40 Analyzed Samplenum ds11000 ds12500 ds15000 ds1250 ds1500 ds1100 ds110 145035145006 145035145008 145035145009 145035145010 145035145011 145035145012 145035145007 Filename Segnum 0245006 0245010 0245008 024b009 0245007 0245011 0245012

50	8 0.995	/L 21008	4.760E-5 mg,	AVRG R	21050	20477	21115	19973	21918	23901	18620	Diesel C12-C24
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Page 1

INITIAL CALIBRATION 2ND SOURCE VALIDATION SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Instid : GC13B

Calname : dslical

Calnum : 145035145001

Caldate: 24-JAN-2005 Caltype:

ICV 145035145014 (024b014) standards: 04WS2006

Analyte C	h ICV Seqnum Date Spiked Quant Units %D	
Diesel C12-C24 B	145035145014 24-JAN-2005 500.00 449.31 mg/L -10	

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Name: Hexacosane Calnum: 144505030003 Instrument: GC13B

Hate: 16-DEC-2004 00:39 Inj Vol (uL): Gas Chromatograph #13 (Channel B) TEH: Hexacosane Type: (normal) D

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Calibration levels:

Standards	39 04WS2042	07 04WS2043	35 04WS2044	04 04WS2045	15 04WS2046
Analyzed	16-DEC-2004 00:39 04WS2042	16-DEC-2004 01:07 04WS2043	16-DEC-2004 01:35 04WS2044	16-DEC-2004 02:04 04WS2045	16-DEC-2004 12:15 04WS2046
Samplenum	hex5	hex10	hex25	hex50	hex75
Segnum	144505030017 hex5	144505030018 hex10	144505030019	144505030020	144505030026 hex75
Filename	3505017	3505018	350b019	3505020	3505026
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0.995 20	mg/L 21858 5	4.575E-5	AVRG R	22529	21474 22789 2252	21474	20066	22429
r^2 avg %RSD MnR^2 MxRSD Flags	r' ts avg %R'	1	Type	LS	12 13 14 1	נז נז	1 12 13 14	

Instrument amount = a0 + response * a1 + response^2 * a2 AVRG: Average response factor

of 1

Page 1

Curves:

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Gas Chromatograph #15 (Channel B) TEH Name: dsl Type: (normal) D Instrument: GC15B

H Reviewed By: MMP Date: 05-JAN-2005 16:55 Inj Vol (uL): Calnum: 165007836001

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Calibration levels:

Standards	5 04WS2298	4 04WS2299	3 04WS2300	2 05WS0019	1 04WS2302	9 04WS2303	8 04WS2297
Analyzed	05-JAN-2005 16:55 04WS2298	05-JAN-2005 17:24 04WS2299	05-JAN-2005 17:53 04WS2300	05-JAN-2005 18:22 05WS0019	05-JAN-2005 18:51 04WS2302	05-JAN-2005 19:19 04WS2303	05-JAN-2005 19:48 04WS2297
Samplenum	ds110	ds1100	ds1250	ds1500	ds11000	ds12500	ds15000
	165007836008	165007836009	165007836010	165007836011	165007836012	165007836013	165007836014
Filename Segnum	0055008	002200	0055010	0055011	0055012	0055013	0055014
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Type	AVRG	
L7 Type	485	
	22	
97	21498	
5	1750	
51 51	217	
51 77	106	
	2,	
13	22415	
רו רק רא	2207	
רו רק	2220	
5	1264	
	7	
11 12 13 14 15		
L1		
te	4	
	12-C2	
[yte	sel c	
Ana	Die	

Instrument amount = a0 + response * a1 + response^2 * a2 AVRG: Average response factor

Page 1 of 1

Curves:

INITIAL CALIBRATION 2ND SOURCE VALIDATION SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Instid : GC15B

Calname : dsl

Calnum : 165007836001

Caldate : 05-JAN-2005 Caltype :

ICV 165007836023 (005b023) standards: 04WS2006

Analyte	Ch ICV Seqnum	Date Spiked Quant Units	%D
Diesel C12-C24	B 165007836023	06-JAN-2005 500.00 460.74 mg/L	- 8
	· · · · · · · · · · · · · · · · · · ·		

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Instrument: GC15B Calnum: 165007836002

Gas Chromatograph #15 (Channel B) TEH Reviewed By: MMP Name: mo

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Calibration levels:

Standards	:46 04WS2172	:14 04WS2173	:43 04WS2174	:12 04WS2175	:41 04WS2176	:10 04WS2169
Analyzed	05-JAN-2005 20:46 04WS2172	05-JAN-2005 21:14 04WS2173	05-JAN-2005 21:43 04WS2174	05-JAN-2005 22:12 04WS2175	05-JAN-2005 22:41 04WS2176	05-JAN-2005 23:10 04WS2169
Samplenum	mo50	mo250	mo500	mo1000	mo2500	mo5000
	165007836016	165007836017	165007836018	165007836019	165007836020	165007836021
Filename Segnum	0055016	0055017	0055018	0055019	0055020	005b021
#	Н	73	٣	4	Ŋ	v

ags		
2 MxRSD Flags	5 20	
r^2 %RSD MnR^3	0.99	
r° %RS	19	
avg	14567	
a2 units a	mg/L	
a2		
a1 e	865E-5	
01	6.	
Type X a0	R	
Туре	AVR	
77	10170	
	12481	
77	14940	
12 13	16134	
11 12 13	16461	
11	17215	
9,	c24-c36	
lyte	or oil	
Ana	Mot	

Instrument amount = a0 + response * a1 + response^2 * a2 Page 1 of 1

AVRG: Average response factor

Curves:

INITIAL CALIBRATION REPORT FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Gas Chromatograph #15 (Channel B) TEH Reviewed By: MMP Name: 004ical Type: (normal) Date: 04-JAN-2005 12:08 Inj Vol (uL): 3 Instrument: GC15B Calnum: 165006306001

Calibration levels:

Standards	2:08 04WS2042	2:37 04WS2043	3:06 04WS2044	3:34 04WS2045	1:03 04WS2046
Analyzed	04-JAN-2005 12:08 04WS2042	04-JAN-2005 12:37 04WS2043	04-JAN-2005 13:06 04WS2044	04-JAN-2005 13:34 04WS2045	04-JAN-2005 14:03 04WS2046
Samplenum	hex5	hex10	hex25	hex50	hex75
Segnum	165006306005 hex5	165006306006 hex10	165006306007	165006306008	165006306009
Filename Segnum	0045005	0045006	0045007	0045008	0045009
#	Н	7	٣	4	Ŋ

5 20	4 0.95	. 26015	I/BW	3.844E-5	AVRG R	25964	24701	25481	26541	27389	Hexacosane
72 SD MHR'Z MXRSD Flags	r^2 %RSD	rث اک units avg %RS	a2 units avg	aî	L5 Type X a0	ij	77	21	71	Analyte L1 L2 L3 L	Analyte L1 L2

Instrument amount = a0 + response * a1 + response^2 * a2 AVRG: Average response factor

Page 1 of 1

Curves:

CONTINUING CALIBRATION SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Analyte: Diesel C12-C24

						Avg				
Instid	Ch	Seqnum	Injected	Calnum	Caldate	RF/CF	RF/CF	SpkAmt QntAmt Units	%Д	Max %D Flags
GC11A	Α	115045274003	31-JAN-2005 11:32	114491750001	06-DEC-2004	23890	26030	1000.0 1089.6 mg/L	9	15
GC11A	Α	115045274021	31-JAN-2005 20:32	114491750001	06-DEC-2004	23890	26402	250.00 276.30 mg/L	11	15
GC13B	В	145046706003	01-FEB-2005 11:22	145035145001	24-JAN-2005	21008	19754	500.00 470.17 mg/L	-6	15
GC13B	В	145046706008	01-FEB-2005 16:57	145035145001	24-JAN-2005	21008	19735	1000.0 939.42 mg/L	-6	15
GC13B	В	145048106003	02-FEB-2005 10:42	145035145001	24-JAN-2005	21008	19787	500.00 470.94 mg/L	-6	15
GC13B	В	145048106009	02-FEB-2005 13:58	145035145001	24-JAN-2005	21008	19213	1000.0 914.56 mg/L	-9	15
GC15B	В	165044229048	31-JAN-2005 15:43	165007836001	05-JAN-2005	21818	21704	250.00 248.69 mg/L	-1	15
GC15B	В	165044229063	01-FEB-2005 00:06	165007836001	05-JAN-2005	21818	23360	1000.0 1070.7 mg/L	7	15
GC15B	В	165044229079	01-FEB-2005 07:51	165007836001	05-JAN-2005	21818	22094	250.00 253.17 mg/L	1	15
GC15B	В	165044229093	01-FEB-2005 16:28	165007836001	05-JAN-2005	21818	22819	1000.0 1045.9 mg/L	5	15

CONTINUING CALIBRATION SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Analyte: Motor Oil C24-C36

						Avg				
Instid	Ch	Seqnum	Injected	Calnum	Caldate	RF/CF	RF/CF	SpkAmt QntAmt Units	%D Max %D Flags	
GC15B	В	165044229049	31-JAN-2005 16	6:11 165007836002	05-JAN-2005	14567	15542	500.00 533.48 mg/L	7 15	
GC15B	В	165044229064	01-FEB-2005 00	0:35 165007836002	05-JAN-2005	14567	15764	500.00 541.10 mg/L	8 15	
GC15B	В	165044229080	01-FEB-2005 08	8:20 165007836002	05-JAN-2005	14567	16613	500.00 570.24 mg/L	14 15	
GC15B	В	165044229094	01-FEB-2005 16	6:57 165007836002	05-JAN-2005	14567	14898	500.00 511.37 mg/L	2 15	

CONTINUING CALIBRATION SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Analyte: Hexacosane

						Avg				
Instid	Ch	Segnum	Injected	Calnum	Caldate	RF/CF	RF/CF	SpkAmt QntAmt Units	% D	Max %D Flags
GC11A	A	115045274003	31-JAN-2005 11:3	114506134001	16-DEC-2004	29444	31795	50.000 53.992 mg/L	8	15
GC11A	A	115045274019	31-JAN-2005 19:30	114506134001	16-DEC-2004	29444	32190	50.000 54.663 mg/L	9	15
GC13B	В	145046706003	01-FEB-2005 11:2	2 144505030003	16-DEC-2004	21858	19729	50.000 45.130 mg/L	-10	15
GC13B	В	145046706008	01-FEB-2005 16:5	7 144505030003	16-DEC-2004	21858	22854	50.000 52.280 mg/L	5	15
GC13B	В	145048106003	02-FEB-2005 10:4	2 144505030003	16-DEC-2004	21858	18906	50.000 43.248 mg/L	-14	15
GC13B	В	145048106008	02-FEB-2005 13:2	2 144505030003	16-DEC-2004	21858	21234	50.000 48.573 mg/L	-3	15
GC15B	В	165044229048	31-JAN-2005 15:43	165006306001	04-JAN-2005	26015	28289	50.000 54.370 mg/L	9	15
GC15B	В	165044229063	01-FEB-2005 00:0	165006306001	04-JAN-2005	26015	28445	50.000 54.670 mg/L	9	15
GC15B	В	165044229079	01-FEB-2005 07:5	165006306001	04-JAN-2005	26015	28765	50.000 55.285 mg/L	11	15
GC15B	В	165044229093	01-FEB-2005 16:28	165006306001	04-JAN-2005	26015	27287	50.000 52.444 mg/L	5	15

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 114491750 Instrument: GC11A Analytical Method: EPA 8015B

Gas Chromatograph #11 (Channel A) TEH SOP Version: TEH rv12

Begun: 06-DEC-2004

SOP Version: TEH_rv12

1:BUNKC:=5196.67 Stds Used 12 1 m ហ 9 4 IOC SPK UL m m m m mm m ω α m 0.09915 0.09992 0.09917 0.09976 0.09911 0.0995 0.1000 0.1001 0.0994 0.005 0.005 0.005 0.005 0.005 0.005 1.0 1.0 1.0 1.0 1.0 1.0 PDF 1.0 50.0 1.0 1.0 1.0 1.0 1.0 1.0 2.0 1.0 14:16 14:46 15:15 17:42 18:45 19:43 22:10 22:40 01:36 12:48 13:18 15:44 16:14 17:13 19:14 20:13 21:11 23:09 00:07 01:06 02:06 13:47 16:43 20:42 21:41 23:38 00:37 03:05 06-DEC-2004 07-DEC-2004 06-DEC-2004 06-DEC-2004 06-DEC-2004 07-DEC-2004 07-DEC-2004 07-DEC-2004 07-DEC-2004 Matrix Water Water Water Water Water Water Soil Soi1 Soi 1 Soil Soil Soil Soil Soil Batch 97155 97146 97153 97153 97153 97153 97153 97153 97155 97155 97155 97146 97155 97155 97155 Ŋ വ Ŋ 176363-015 176363-012 176363-009 176363-006 176268-029 176363-003 176268-009 76268-015 176268-010 176268-002 176268-012 76341-001 176268-013 176268-017 176268-014 Samplenum ds11000 ds12500 ds15000 ds1100 ds1250 ds1500 primer ds110 dsl dsl dsl CCC q ဝူ 잍 SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE CAL CAL CAL GAL CAL CAL ICAL 5 SG SCC SG Filename 341a015 341a016 341a008 341a009 341a010 341a012 341a001 341a002 341a003 341a004 341a005341a006 341a007 341a011341a013 341a014341a017341a018 341a019 341a020 341a021 341a022 341a023 341a024 341a025 341a026 341a027 341a028 341a029 341a030 341a031 900 800 018 001 003 004 005 007 600 010 012 013 014 015 910 017 019 020 021 022 023 029 011 027

Stds used: 1=04WS1748 2=04WS1747 3=04WS1721 4=04WS1745 5=04WS1744 6=04WS1743 7=04WS1742 8=04WS2006 9=04WS2215 10=04WS2074 11=04WS2207 12=04WS2195 13=04WS2258

2

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 114491750 Instrument: GC11A Analytical Method: EPA 8015B

Gas Chromatograph #11 (Channel A) TEH
SOP Version: TEH_rv12

Begun: 06-DEC-2004

Filenam	Type	# Filename Type Samplenum Batch Matrix Analyzed	Batch	Matrix	Analyzed IDF	PDF	IOC SPK ul. Stds Used	Stds Used >LR
032 341a032	SAMPLE	176402-001	97155	Soil	07-DEC-2004 03:35 5.0	0.1007	2 1 3	10:BUNKC:=37347.2
033 341a033		SAMPLE 176268-001	97146	Soil	07-DEC-2004 04:04 2.0	0.1001	М	
034 341a034	SAMPLE	176402-002	97155	Soil	07-DEC-2004 04:34 10.0	0.1008	٣	1:BUNKC:=15515.6
035 341a035	SAMPLE	176268-011	97155	Soil	07-DEC-2004 05:03 20.0	0.1981	٣	
036 341a036	SAMPLE	176268-016	97155	Soil	07-DEC-2004 05:33 1.0	0.09968	m	
037 341a037	CCA	dsl			07-DEC-2004 06:02 1.0	1.0	m	13
038 341a038	CCA	ош			07-DEC-2004 06:32 1.0	1.0	m	12
039 341a039 X	×	200			07-DEC-2004 07-01 1 0			13

Stds used: 1=04WS1748 2=04WS1747 3=04WS1221 4=04WS1745 5=04WS1744 6=04WS1743 7=04WS1742 8=04WS2006 9=04WS2215 10=04WS2074 11=04WS2207 12=04WS2195 13=04WS2258

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 144505030 Instrument: GC13B Analytical Method: EPA 8015B

Gas Chromatograph #13 (Channel B) TEH
SOP Version: TEH_rv12

Begun: 15-DEC-2004

# קין החפתם (יקו	4 4 4 4 4	Samplenim	Batch Matrix Analyzed	TO SEK 11T.	VI. pH Q+dg Hgad	
,-,		primer	-2004 17:10			
002 350b002	×	; qi	15-DEC-2004 17:37 1.0			
003 3505003	ICAL	ds110	15-DEC-2004 18:05 1.0		1	
004 3505004	ICAL	ds1100	15-DEC-2004 18:33 1.0		2	
005 3505005	ICAL	ds1250	15-DEC-2004 19:01 1.0		3	
9009320000	ICAL	ds11000	15-DEC-2004 19:29 1.0		7	
007 3505007	ICAL	ds12500	15-DEC-2004 19:58 1.0		5	
008 3505008	ICAL	ds15000	15-DEC-2004 20:26 1.0		9	
009 3505009	×	ib	15-DEC-2004 20:54 1.0			
010 3505010	ICAL	mo50	15-DEC-2004 21:22 1.0		1	
011 3505011	ICAL	mo250	15-DEC-2004 21:50 1.0		8	
012 350b012	ICAL	mo500	15-DEC-2004 22:18 1.0		6	
013 350b013	ICAL	mo1000	15-DEC-2004 22:46 1.0		10	
014 350b014	ICAL	mo2500	15-DEC-2004 23:14 1.0		11	
015 350b015	ICAL	mo5000	15-DEC-2004 23:43 1.0		12	
016 3505016	×	ib	16-DEC-2004 00:11 1.0			
	ICAL	hex5	16-DEC-2004 00:39 1.0		13	
018 3505018	ICAL	hex10	16-DEC-2004 01:07 1.0		14	
019 3505019	ICAL	hex25	16-DEC-2004 01:35 1.0		15	
020 3505020	ICAL	hex50	16-DEC-2004 02:04 1.0		16	
021 3505021	×	ib	16-DEC-2004 02:32 1.0			
022 3505022	ICV	dsl	16-DEC-2004 03:00 1.0		1 17	
023 350b023	CCV	dsl	16-DEC-2004 03:28 1.0		1 18	
024 350b024	CCV	Ош	16-DEC-2004 03:56 1.0		19	
025 3505025	×	ib	16-DEC-2004 11:47 1.0			
026 3505026	ICAL	hex75	16-DEC-2004 12:15 1.0		20	
027 350b027	ICAL	dsl	16-DEC-2004 14:00 1.0		21	
028 350b028	×	qi	16-DEC-2004 14:27 1.0			!
029 2505029	777	ר מילי	0 F 88. FF FOOC DBC 31	r	-	

Stds used: 1=04wS2298 2=04wS2299 3=04wS2300 4=04wS2302 5=04wS2303 6=04wS2297 7=04wS2172 8=04wS2173 9=04wS2174 10=04wS2175 11=04wS2176 12=04wS2169 13=04wS2042 14=04wS2043 15=04WS2044 16=04WS2045 17=04WS2006 18=04WS2215 19=04WS2365 20=04WS2046 21=04WS2389

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 114506134 Instrument: GC11A Analytical Method: EPA 8015B

Gas Chromatograph #11 (Channel A) TEH
SOP Version: TEH rv12

Begun: 16-DEC-2004

Stds Used 4 S α IOC SPK uL 0.09992 0.09998 0.09901 0.09994 0.09917 0.09944 0.09932 0.1000 0.1002 0.0994 PDF 1.0 21:07 18:12 20:08 21:36 14:00 15:41 19:10 20:38 22:06 13:02 15:12 16:10 16:44 17:13 17:42 18:41 19:39 22:35 12:04 12:33 13:31 16-DEC-2004 Analyzed Matrix Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Batch 97463 97463 97463 97463 97463 97463 97463 97463 97463 97521 .76613-016 .76613-003 QC276443 S .76613-014 76613-010 76613-006 176613-011 176613-008 176613-004 176613-001 Samplenum hex50 hex10 hex75 hex25 hex5 dsl ds1 CCV ib 잍 잍 SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE ICAL ICAL ICAL GAL rcs Ç CG Filename 351a006 351a008 251a015 \$51a016 351a001 351a002 351a003 351a004 351a005 351a007 351a009 351a010 351a012 351a013 351a014 351a017 351a018 351a019 351a020 351a021 351a011 351a022 005 900 800 600 010 019 001 002 003 004 007 013 014 015 016 018 012 017 020 011

Stds used: 1=04WS2042 2=04WS2043 3=04WS2044 4=04WS2045 5=04WS2046 6=04WS2215 7=04WS2365 8=04WS2207

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 165006306 Instrument: GC15B Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv12

Begun: 04-JAN-2005

>LR												
VL pH Stds Used		-			1	2	3	4	5	-	9	7
IOC SPK uL											M	E E
Batch Matrix Analyzed IDF	04-JAN-2005 09:06 1.0	04-JAN-2005 09:34 1.0	04-JAN-2005 10:29 1.0	04-JAN-2005 10:58 1.0	04-JAN-2005 12:08 1.0	04-JAN-2005 12:37 1.0	04-JAN-2005 13:06 1.0	04-JAN-2005 13:34 1.0	04-JAN-2005 14:03 1.0	04-JAN-2005 14:32 1.0	04-JAN-2005 15:01 1.0	04-JAN-2005 15:29 1.0
Samplenum	primer	qi	paint f.p.	qi	hex5	hex10	hex25	hex50	hex75	qi	dsl	ОШ
# Filename Type	001 004b001 X	002 004b002 X	003 004b003 X	004 004b004 X	005 004b005 ICAL	0045006	007 004b007 ICAL	008 004b008 ICAL	0045009	010 004b010 X	011 004b011 CCV	012 004b012 CCV

Stds used: 1=04WS2042 2=04WS2043 3=04WS2044 4=04WS2045 5=04WS2046 6=04WS2406 7=04WS2365

Page 1 of

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 165007836 Instrument: GC15B Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv12

Begun: 05-JAN-2005

Filename Type	Samplenum Batch M	Matrix Analyzed	IDF	IOC SPK uL	VL pH Stds Used	>LR
•	dsl	05-JAN-2005 10:08	1.0	4 3	1	
	Out	05-JAN-2005 10:36	1.0	1 3	2	
	tank check #	05-JAN-2005 15:21	1.0			
	tank check 2	05-JAN-2005 15:50	1.0			
•	ib	05-JAN-2005 16:27	1.0			
_	ds110	05-JAN-2005 16:55	1.0		3	
ICAL	ds1100	05-JAN-2005 17:24	1.0		4	
ICAL	ds1250	05-JAN-2005 17:53	1.0		5	
ICAL	ds1500	05-JAN-2005 18:22	1.0		9	
ICAL	ds11000	05-JAN-2005 18:51	1.0		7	
ICAL	ds12500	05-JAN-2005 19:19	1.0		8	
ICAL	ds15000	05-JAN-2005 19:48	1.0		6	
••	ib	05-JAN-2005 20:17	1.0			
ICAL	mo50	05-JAN-2005 20:46	1.0		10	
ICAL	mo250	05-JAN-2005 21:14	1.0		11	
-	mo500	05-JAN-2005 21:43	1.0		12	
ICAL	mo1000	05-JAN-2005 22:12	1.0		13	
ICAL n	mo2500	05-JAN-2005 22:41	1.0		14	
ICAL	mo5000	05-JAN-2005 23:10	1.0		15	
•••	ib	05-JAN-2005 23:39	1.0			
•	dsl	06-JAN-2005 00:08	1.0	က	16	
. 1	ib	06-JAN-2005 00:36	1.0			
•	dsl	06-JAN-2005 01:05	1.0	က	1	
ī	Om	06-JAN-2005 01:34	1.0	3	2	

Stds used: 1=04WS2358 2=04WS2365 3=04WS2298 4=04WS2299 5=04WS2300 6=05WS0019 7=04WS2302 8=04WS2303 9=04WS2297 10=04WS2172 11=04WS2173 12=04WS2174 13=04WS2175 14=04WS2176 15=04WS2169 16=04WS2006

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 145035145 Instrument: GC13B Analytical Method: EPA 8015B

(Channel B) Gas Chromatograph #13
SOP Version: TEH_rv12

Begun: 24-JAN-2005 TEH

# Filename Type	Type	Samplenum	Batch Matrix Analyzed	IDF	IOC SPK uL	VL pH Stds Used	
001 0245001	×	primer	24-JAN-2005 09:45 1.0	1.0			
002 024b002	×	qi	24-JAN-2005 10:13	1.0			
003 024b003	CCA	dsl	24-JAN-2005 10:41	1.0	3	1	
004 024b004	CCV	Our	24-JAN-2005 11:10	1.0	1 3	2	
005 0245005	×	qi	24-JAN-2005 12:20 1.0	1.0			
006 0245006	ICAL	ds110	24-JAN-2005 12:48	1.0		3	
007 0245007	ICAL	ds1100	24-JAN-2005 13:16	1.0		4	
008 024b008	ICAL	ds1250	24-JAN-2005 13:44	1.0		5	
009 024b009	ICAL	ds1500	24-JAN-2005 14:12	1.0		9	
010 0245010	ICAL	ds11000	24-JAN-2005 14:40	1.0		7	
011 0245011	ICAL	ds12500	24-JAN-2005 15:09	1.0		8	
012 024b012	ICAL	ds15000	24-JAN-2005 15:37	1.0		6	
013 024b013	×	qi	24-JAN-2005 16:05	1.0			
014 024b014	ICA	dsl	24-JAN-2005 16:33	1.0	m	10	
015 0245015	×	qi	24-JAN-2005 17:01	1.0			
016 0245016	CCV	dsl	24-JAN-2005 17:29 1.0	1.0	С	1	

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 165044229 Instrument: GC15B Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH_rv12

Channel B) TEH Begun: 30-JAN-2005

# Filename	Туре	Samplenum	Batch	Matrix Analy	Analyzed	IDF	PDF	IOC SPK uL	Stds Used
1004050 100	×	primer			N-2005 17	:09 1.0			
002 0305002	×	ib			30-JAN-2005 17:	:38 1.0			
003 0302003	CCA	Ott			30-JAN-2005 18:	:07 1.0	1.0	8	1
004 0305004	CCV	dsl			30-JAN-2005 18:	:36 1.0	1.0	٣	2
005 0305005	CCA	trans			N-2005 19	:05 1.0	1.0	٣	3
9009080 900	BLANK	QC281038 S	98742	Soil	1-2005 19	:34 1.0	0.09978	8	
007 030b007	SAMPLE	177418-003	98742	Soil	1-2005 20	:03 1.0	0.1001	e	
8009080 800	SAMPLE	177418-002	98742	Soil	1-2005 20	:32 1.0	0.09984	æ	
6009080 600	SAMPLE	177418-004	98742	Soil	1-2005 21	:01 1.0	0.09996	8	
010 0302010	SAMPLE	177399-043	98743	Soil	N-2005 21	:30 20.0	96660.0	1 3	9:BUNKC:=16365.3
011 0305011	SAMPLE	177399-044	98743	Soil	30-JAN-2005 21:	:59 20.0	0.1001	8	
012 030b012	SAMPLE	177399-031	98742	Soil	1-2005 22	:28 1.0	0.0999	8	
013 030b013	SAMPLE	177399-047	98743	Soi 1	-2005 2	56 2	0.09921	8	
	MSS	177399-046	98743	Soil	30-JAN-2005 23:	:25 20.0	0.09932	8	
015 Q30b015	SAMPLE	177399-041	98743	Soil		:54 1.0	0.1001	1 1 3	11:BUNKC:=29343.2
	CCA	dsl			1-2005 00	Η̈́	1.0	m	4
	CCV	ош			1-2005 00:	52 1.	1.0	٣	1
018 0305018	CCV	dsl			31-JAN-2005 01:	20 1.0			4
019 0305019	CCV	trans			÷	49 1.	1.0	m	3
	SAMPLE	177399-001	98740	Soil	Ļ	18 3	96660.0	æ	2:BUNKC:=9005.74
	SAMPLE	177399-039	98743	Soil	31-JAN-2005 02:	46 1	0.09992	٣	
	SAMPLE	177399-038	98743	Soil	31-JAN-2005 03:	15 1.	.099	m	
	SAMPLE	177399-025	98740	Soil	31-JAN-2005 03:	44 1	0.1001	ж	
024 030b024	SAMPLE	177399-042	98743	Soil	31-JAN-2005 04:	12 5.0	0.09992	m	2:BUNKC:=5166.83
	×	177399-026	98742	Soil	31-JAN-2005 04:	41 1	0.09994	m	11:BUNKC:=26207.3
9	SAMPLE	177418-001	98742	Soil	31-JAN-2005 05:	10 1.0	0.09952	m	
	SAMPLE	177399-015	98740	Soil	31-JAN-2005 05:	38 20.0	.100	m	3:BUNKC:=13118.0
028 0305028	SAMPLE	177399-003	98740	Soil	31-JAN-2005 06:	07 10	.099	m	
	SAMPLE	177399-053	98743	Soil	5	36 1.	0.09956	m	
0	CCV	ds1			31-JAN-2005 07:	04 1.	1.0	m	5
031 030b031	CCV	Ош			31-JAN-2005 07:	33 1.0	1.0	Ж	1

Stds used: 1=05WS0066 2=05WS0171 3=04WS2026 4=04WS2406 5=05WS0021 6=05WS0114 7=05WS0185 8=05WS0184

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 115045274 Instrument: GC11A Analytical Method: EPA 8015B

Gas Chromatograph #11 (Channel A) TEH
SOP Version: TEH_rv12

Begun: 31-JAN-2005

# Filename	le Type	Samplenum Batch	Matri	Batch Matrix Analyzed IDF	PDF	IOC SPK uL	Stds Used >LR
001 031a001	×	primer		31-JAN-2005 10:34 1.0			
002 031a002	×	ib		31-JAN-2005 11:03 1.0			
003 031a003	CCV	dsl		31-JAN-2005 11:32 1.0	1.0	m	1
004 031a004	CCV	шо		31-JAN-2005 12:01 1.0	1.0	m	2
005 031a005	CCV	jet		31-JAN-2005 12:37 1.0	1.0	m	3
006 031a006	BLANK	QC281038 S 98742	Soil	31-JAN-2005 13:10 1.0	0.09978	7 3	
007 031a007	SAMPLE	177383-001 S 98742	Soil	31-JAN-2005 13:39 1.0	0.0999	m	1:BUNKC:=11958.9
008 031a008	SAMPLE	177383-005 S 98742	Soil	31-JAN-2005 14:09 10.0	0.1001	ĸ	7
009 031a009	SAMPLE	177383-003 S 98742	Soil	31-JAN-2005 14:38 1.0	0.09992	ĸ	1:BUNKC:=7280.46
010 031a010	SAMPLE	177383-006 S 98742	Soil		0.1001	٣	1:BUNKC:=9382.58
	SAMPLE	177383-007 S 98742	Soil		0.0999	1 3	5:BUNKC:=19544.3
	SAMPLE	177383-002 S 98742	Soil	31-JAN-2005 16:05 1.0	0.1001	m	1:BUNKC:=10307.3
	SAMPLE	177383-004 S 98742	Soil		0.1001	1 1 3	7:BUNKC:=43355.2
014 031a014	×	ib		31-JAN-2005 17:04 1.0			
015 Ø31a015	×	ib		31-JAN-2005 17:33 1.0			
016 B31a016		QC281096 S 98754	Soil	31-JAN-2005 18:02 1.0	0.09992	m	
	SAMPLE	177383-014 S 98754	Soil	31-JAN-2005 18:32 1.0	0.1000	٣	
	×	CCV		31-JAN-2005 19:01 1.0	1.0	٣	4
019 031a019	CCV	шо		31-JAN-2005 19:30 1.0	1.0	æ	2
		jet		31-JAN-2005 19:59 1.0	1.0	٣	3
	CCV	dsl		31-JAN-2005 20:32 1.0	1.0	8	4
022 031a022	SAMPLE	177383-016 S 98754	Soil	31-JAN-2005 21:01 10.0	0.1001	٣	
023 031a023	SAMPLE	177383-015 S 98754	Soil	31-JAN-2005 21:30 10.0	0.09992	æ	
024 031a024	SAMPLE	177383-017 S 98754	Soil	31-JAN-2005 21:59 10.0	0.0999	٣	
025 031a025	SAMPLE	177383-008 S 98754	Soil	31-JAN-2005 22:29 10.0	0.09994	e E	
	SAMPLE	177383-009 S 98754	Soil	31-JAN-2005 22:58 10.0	0.1000	m	
027 031a027	×	ib		31-JAN-2005 23:28 1.0			
028 031a028		-010 S	Soil	31-JAN-2005 23:57 10.0	0.09996	m	
		177383-011 S 98754	Soil	01-FEB-2005 00:26 10.0	0.1001	٣	
0 031a03	SAMPLE	177383-012 S 98754	Soil	01-FEB-2005 00:56 2.0	0.1001	٣	
031 031a031	SAMPLE	177383-013 S 98754	Soil	01-FEB-2005 01:25 1.0	0.1000	3	

Stds used: 1=04WS2406 2=05WS0066 3=05WS0114 4=05WS0021

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 115045274 Instrument: GC11A Analytical Method: EPA 8015B

Gas Chromatograph #11 (Channel A) TEH
SOP Version: TEH_rv12

Begun: 31-JAN-2005

>LR								1:BUNKC:=7174.73							
Stds Used		1	2	11	3			1:8				4	[2	4	
IOC SPK uL	3	m	m		ĸ	1 3	7 3	1 3	1 3		1 3	m	٣	3	
PDF	96660.0	1.0	1.0		1.0	0.09992	0.1000	0.1000	0.1000		0.09905	1.0	1.0	1.0	
alyzed IDF	01-FEB-2005 01:55 50.0	01-FEB-2005 02:24 1.0	01-FEB-2005 02:53 1.0	01-FEB-2005 03:23 1.0	01-FEB-2005 03:52 1.0	01-FEB-2005 04:21 50.0	01-FEB-2005 04:51 50.0	01-FEB-2005 05:20 1.0	01-FEB-2005 05:49 50.0	01-FEB-2005 06:19 1.0	01-FEB-2005 06:48 1.0	01-FEB-2005 07:18 1.0	01-FEB-2005 07:47 1.0	01-FEB-2005 08:17 1.0	
Batch Matrix Analyzed	Soil 01	01	01	01	01	Soil 01	Soil 01	Soil 01	Soil 01	01	Soil 01	01	01,	01.	
Batch	98754					98754	98754	98754	98754		3 98754			}	
Samplenum	177390-001	dsl	шо	CCV	jet	177390-003	177390-004	177403-005	177390-002	qi	177433-001 S 98754	dsl	om	ds1	
Type	SAMPLE	CCV	CCV	×	CCV	SAMPLE	MSS	SAMPLE	SAMPLE	X	SAMPLE	×	×	CCA	
# Filename Type	032 031a032	033.031a033	034 031a034	035 031a035	036 031a036	037 031a037	038 031a038	039 031a039	040 031a040	041 031a041	042 031a042	043 031a043	044 031a044	045 031a045	35

Stds used: 1=04WS2406 2=05WS0066 3=05WS0114 4=05WS0021

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SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 165044229 Instrument: GC15B Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH
SOP Version: TEH rv12

Begun: 30-JAN-2005

^LR 2:JETA:1=5432.20 11:BUNKC:=25779.2 11:BUNKC:=28731.8 2:BUNKC:=5260.88 2:BUNKC:=7712.32 2:BUNKC:=8194.03 11:BUNKC:=28399. 11:BUNKC:=29865 Stds Used S IOC SPK ul 3 m m m m 0.008333 0.008333 0.008333 96660.0 0.09964 0.09994 0.09915 0.09988 0.09952 0.09992 0.09968 0.09974 0.09944 0.09966 0.0996 0.1001 0.1001 0.1001 0.1002 0.1000 0.1001 1.0 1.0 1.0 1.0 1.0 1.0 1.0 PDF 25.0 40.0 10.0 50.0 10.0 10.0 1.0 1.0 1.0 1.0 11:23 13:19 13:48 15:14 16:40 17:44 18:26 19:45 10:25 10:55 11:52 12:21 12:50 14:45 15:43 16:11 19:16 20:14 20:43 21:41 08:59 09:57 14:17 21:12 22:10 31-JAN-2005 Matrix Analyzed Water Water Water Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil 98743 Batch 98742 98743 98742 98742 98711 98754 98769 98769 98769 98711 98742 98743 98742 98743 98711 98754 98769 98769 98769 98769 S 177325-009 177325-008 177325-009 C281095 S 177383-004 177399-041 177399-043 177399-026 177419-001 .77434-005 77434-006 177434-009 177434-010 177434-011 Samplenum 00281039 QC281040 QC281045 20281150 QC281044 QC281041 QC281151 trans trans trans CCC dsl dsl et õ 잍 SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE **SLANK** BLANK MSD MSS ģ S 200 LCS Filename 030b046 930b047 0305038 030b032 0305034 0300035 0300036 0305037 0305039 030b040 030b043 030b048 0300000 0300056 030b033 030b041 030b042 030b044 030b045 030b049 0305051 0305052 0300053 030b054 0300055 0305057 0305058 0300059 0300000 030b061 0305062 037 038 040 041 043 044 045 047 048 049 020 051 052 053 054 055 062

Stds used: 1=05WS0066 2=05WS0171 3=04WS2026 4=04WS2406 5=05WS0021 6=05WS0114 7=05WS0185 8=05WS0184

4

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 145046706 Instrument: GC13B Analytical Method: EPA 8015B

Gas Chromatograph #13 (Channel B) TEH
SOP Version: TEH_rv12

Begun: 01-FEB-2005

Filename	Type	# Filename Type Samplenum		Matrix	Batch Matrix Analyzed	IDF	PDF	IOC	SPK uL	IOC SPK uL Stds Used >I	>LR
001 0325001	×	primer			01-FEB-2005 10:26 1.0	5 1.0					
002 0325002	×	qį			01-FEB-2005 10:53 1.0	3 1.0					
003 0325003	CCV	dsl			01-FEB-2005 11:22 1.0	2 1.0	1.0		m	1	
004 032b004	CCA	Ош			01-FEB-2005 11:50 1.0	0.1.0	1.0	Н	m	2	
005 032b005	CCV	dsl			01-FEB-2005 15:03 1.0	3 1.0	1.0		m	3	
006 0325006	XS	QC281097	98754	Soil	01-FEB-2005 15:50 3.0	3.0	0.09994		m		
007 0325007	MSD	QC281098	98754	Soil	01-FEB-2005 16:18 3.0	3 3.0	0.09996	-	1 3		
008 0325008	CCV	dsl			01-FEB-2005 16:57 1.0	7 1.0	1.0		m	4	

Stds used: 1=04WS2358 2=05WS0066 3=05WS0184 4=04WS2406

Page 1 of

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 165044229 Instrument: GC15B Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH SOP Version: TEH_rv12

Begun: 30-JAN-2005

^LR 8:BUNKC:=16144.6 11:BUNKC:=36108.4 2:BUNKC:=5978.98 9:BUNKC:=20847.7 91 2:BUNKC:=8275.51 8:BUNKC:=18744 2:BUNKC:=5458 Stds Used m 4 uΓ m m \sim α \sim IOC SPK 133 0.09919 0.09962 0.09946 0.09974 0.09942 0.09905 0.09932 0.09942 96660.0 0.09974 0.09905 0.09992 0.09901 0.1000 0.1000 0.1000 0.1000 0.1000 0.0999 1.0 1.0 PDF 1.0 1.0 1.0 1.0 01-FEB-2005 15:30 20.0 02:02 03:00 08:49 09:19 01:04 02:31 13:48 01:33 03:29 03:58 04:28 04:56 05:25 05:54 06:24 06:53 07:22 07:51 08:20 10:53 11:22 11:51 12:20 12:49 13:18 01-FEB-2005 15:01 01-FEB-2005 Matrix Analyzed Soi1 Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soi1 98769 98769 Batch 98754 98769 98769 98769 98769 98769 98769 98769 98769 98754 98742 98754 98769 98754 98754 98754 98754 Ŋ 177389-016 177434-004 177434-008 177434-003 177434-002 177434-012 177389-014 177389-016 177433-001 177383-007 177403-005 177390-004 177390-003 177390-002 177434-007 177434-007 177390-001 Samplenum QC281152 QC281153 trans trans et CCV CC ds1 et dsl ဓ ρ ě SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE CG MSS MSS CCC CCV CCS MSD **YSS** Ş Filename 030b063 0300065 0305067 0305073 0305074 0305075 0300076 **330**5078 030000 030b064 9909080 0300068 030D069 0305070 030b071 030b072 Q30b077 030b079 0300086 0300088 030000 0305081 0305082 0300085 0300089 030b092 0300083 030b084 0305087 0305093 030b091 070 063 990 890 072 073 074 940 078 079 080 083 085 087 088 089 064 065 190 690 075 077 980 071 081 082 084

Stds used: 1=05WS0066 2=05WS0171 3=04WS2026 4=04WS2406 5=05WS0021 6=05WS0114 7=05WS0185 8=05WS0184

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 165044229 Instrument: GC15B Analytical Method: EPA 8015B

Gas Chromatograph #15 (Channel B) TEH SOP Version: TEH rv12

Begun: 30-JAN-2005

9:BUNKC:=30084.7 9:BUNKC:=18371.5 11:BUNKC:=36096.9 9:BUNKC:=22177 Stds Used _ 9 'n α 5 ω 벍 ω m m $^{\circ}$ ന IOC SPK Н 14 0.09992 0.09998 0.09948 0.09923 0.09925 0.09938 0.09988 0.09946 0.09903 0.0998 0.0993 0.0999 0.0993 1.0 PDF 1.0 1.0 1.0 1.0 1.0 1.0 10.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 19:46 20:15 21:42 22:40 01:35 20:44 21:13 22:11 23:09 23:38 00:37 01:06 02:05 03:03 03:32 04:01 04:30 04:59 05:29 00:07 02:34 05:58 16:57 01-FEB-2005 02-FEB-2005 01-FEB-2005 01-FEB-2005 01-FEB-2005 01-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 01-FEB-2005 01-FEB-2005 01-FEB-2005 01-FEB-2005 01-FEB-2005 01-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 02-FEB-2005 01-FEB-2005 Matrix Analyzed Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil Batch 98794 98794 98794 98794 98794 98794 98794 98794 98794 98794 98794 98794 98794 Ŋ ល ഗ ഗ ഗ 177446-002 177446-003 177446-004 177446-005 Ŋ QC281245 S 177446-001 .77389-012 177415-003 177415-001 177415-002 Samplenum C281244 QC281246 QC281247 trans trans jet dsl dsl dsl ρ. 5 i. õ SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE BLANK XCCV Type XMSD LCS Ç CC CCC SG SC XMS CG MSS CCC Filename 030b094 0300095 0300096 0305097 0300098 0305099 0305100 0305105 830b109 0305110 030b115 118 030b118 0305102 0305103 030b104 0305106 0305107 930b108 030b116 030b117 0305101 030b111 030b112 030b113 030b114 094 095 960 097 960 660 100 105 801 109 110 112 113 115 101 102 103 104 907 107 111 114

Stds used: 1=05WS0066 2=05WS0171 3=04WS2026 4=04WS2406 5=05WS0021 6=05WS0114 7=05WS0185 8=05WS0184

SEQUENCE SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

Sequence: 145048106 Instrument: GC13B Analytical Method: EPA 8015B

Gas Chromatograph #13 (Channel B) TEH
SOP Version: TEH_rv12

Begun: 02-FEB-2005

	# Filename Type Samplenum Batch Matrix Analyzed	Batch	Matrix	Analyzed	IDF	PDF	IOC SPK uL	IOC SPK uL Stds Used >LR
	primer			02-FEB-2005 09:46 1.0	46 1.0			
	ib			02-FEB-2005 10:14 1.0	14 1.0			
CCV	ds1			02-FEB-2005 10:42 1.0	42 1.0	1.0	8	
CC	Ош			02-FEB-2005 11:10 1.0	10 1.0	1.0	1 3	2
뒼	SAMPLE 177446-005 S 98794	S 98794	Soil	02-FEB-2005 11:39 3.0	39 3.0	0.09925	8	
暑	SAMPLE 177446-004 S 98794	S 98794	Soil	02-FEB-2005 12:07 20.0	07 20.0	0.09923	8	
MS	QC281097	98754	Soil	02-FEB-2005 12:35 3.0	35 3.0	0.09994	3	
CCA	Our			02-FEB-2005 13:22 1.0	22 1.0	1.0	1 3	12
7777 6004550 600	ָנֵייָרָ <i>ב</i> ּ			02-FFB-2005 13:58 1 0	0 1	·	r	2

Stds used: 1=04WS2358 2=05WS0066 3=04WS2406

REPORTING SUMMARY FOR 177403 TEHM Soil Curtis & Tompkins Laboratories

			D	M	Н	
·			S	0	C	
Lab ID Inst ID Analyz	ed	IDF	:	2	S	
	05 05:20					
	05 13:18					
	05 12:10					
177403-005 GC17A 02/14/	05 13:54	1.0	+	+	+	
	12.10222000000221012210000012200022		-0.0000000000	-000000	tatorosa	
QC281095 GC15B 01/31/	05 18:26	1.0	+	+	+	
00001006 00111 01/01/	ar 10 00	3 6		0.00000000	19999991	
QC281096 GC11A 01/31/	05 18:02	1.0	+		4	
QC281097 GC13B 02/02/	05 12:35	э ဂ				
QC261097 GC13B 02/02/	UU 12:33	J. U	+		+	
QC281098 GC13B 02/01/	05 16:18	3 0	+		+	
<u> </u>	· · · · ·	· ·		1000000		

-2005 18:44	. 05WS0159D : 05WS0094F :	Clean Comments Method	3630C sg	3630C sg		3630c sg						3630C sg							SSW				3630c sg			
31-JAN-2005	Spike #1 ID Spike #2 ID Spike #3 ID	Sp 2 Sp 3 Analyses Vol Vol	O TEHM	O TEHM	O TEHM	O TEKM	0 TEHM	O TEHM	O TEHM	0 TEHM	0 TEHM	0 TEHM				O TEHM			O TEHM	0 TEHM	0 тен	0 TEHM	O TEH	1 TEH	1 TEH	1 TEH
ation Summary		Prep Clean pH Sp 1 D.F. D.F. Vol	0.099940 1 1	0.100000 1 1	0.099960 1 1	0.100080 1 1	0.100080 1 1	0.100000 1	0.100000 1 1	0.099920 1 1	0.100080 1 1	0.099900 1 1	0.099761 1 1	0.099049 1 1	0.099920 1 1	0.099960 1 1	0.100000 1 1	0.099920 1 1	0.100000 1	0.100000 1 1	0.100180 1 1	0.099049 1 1	0.099920 1 1	0.099920 1 1	0.099940 1 1	0.099960 1
Sample Preparation	Analysis : N/A Bgroup : TEH Units : g Clean-up :	init Units Final	50.03 9~ 5	50 %	50.02 9	49.96 9	49.96 97 5	50 %	50 %	50.04 9/ 5	49.96 9/ 5	50.05 g/ 5	50.12 g/ 5	50.48 9/ 5	50.04 9/ 5	50.02 9/ 5	50 %	50.04 9/ 5	50 7 5	50 %	49.91 9/ 5	50.48 9/ 5	50.04 g/ 5	50.04 g/ 5	50.03 9/ 5	50.02 g / 5
Curtis & Tompkins Laboratories	98754 31-JAN-2005 Jessie O'Brien Mee SHAKER TABLE	Matrix	ne Environmental Soil	Environmental S	Environmental S	Environmental S	Environmental S		Environmental s		Baseline Environmental Soil	Baseline Environmental Soil	utions, I	_	-		akeside Recycling Soil	akeside Recycling Soil	Lakeside Recycling Soil		'RC Environmental Solutions, I Soil	Clayton Group Services Soil		Soil	Soil	Soil
Curtis & Tompki		e Client	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baselin	Baselin	TRC Env	TRC Env	TRC Env	Lakesid	Lakesid	Lakesid	Lakesid	Treadwe	TRC Env	Clayton			of	of 177390-004
	Batch Number Date Extracted: Extracted by Prep Method:	Sample Type	177383-008	177383-009	177383-010	177383-011	177383-012	177383-013	177383-014	177383-015	177383-016	177383-017	177389-013	177389-014	177389-015	177390-001	177390-002	177390-003	177390-004	1774403-005	177479-001	177433-001	QC281095 MB	ac281096 LCS		

URD for JOM 1/31/05 Reviewed By: Prep Chemist:

Relinquished By: JRD for JOM 1/31/05 Received By: <

518 Date: 1/3/18

	•					***	Page	39
I IMS B	atch No: <u>98754</u>	Extraction Me	thod:			Cleanup M	lethod (if ne	cessary):
	Analysis TEH	Mechan		ker Tab	le	₽ EPA	3630 Silica	Gel
	acted by: 10M	□ EPA 35	50 Soni	cation		☐ Othe	er	
	xtracted: 31 Jan 05	☐ Other						
;	71 3 1 3 1 3 1 1 0 0 1 1 1 1 1 1 1 1 1 1	_	-					
		Weight of	\mathbf{F}^{j}	inal	Clea	nup		
	Sample # & letter	Sample (g)	Volum	e (mL)	(x if	needed)	Commen	ts
· []	77383-008 D	50.03	5.0		X			
·	1 -0091	50.00	1					
	-010	50.00						·
<u> </u>	-011	49.96						
5	-012	49.96						
<u> </u>	-013	50.00						
	-014	50.00						
	-015	50.04						
-	-016	49.96			\prod		-	<u> </u>
10	V -017 V	50.05			$ \Psi $			
· · · · ·	17390-001 A	50.02						
	1 -0021	50.00	T					
	-003	50.04						
-	V -00+V	50,00				MSS		
15 i	77403-005	50.00						
P-	77419-001	49.91					 	
	MB 12C281095	50.04			X			
	CS 1 96	50.04			1			
	MS 97	50.03				177390-	004A	
	MSD V 98	50.02				<u> </u>	· v	<u>.</u>
.	177389-013	50.12			ļ	#		
	-014	50,48				<u> </u>		
Γ	V -015	50.04			ļ.,	<u> </u>	, u	
	177433-001	50A8	N	<u>/</u>	<u> </u>	1		<u>-</u>
Γ			101					
. –			- 1/	31105		Mfa & Lot	# / LIMS # / Ti	me Date/Init
		Sand weighed	l out for (C sample	es FJAI	<u>Ша</u> Б8	7 LXIVIS # / 11	Jom 31 Jai
•	Samples were dried	l with CH2Cl2-rins	ed granul	ar Na2SC	4 E/A	14135439		
1.	0 mL of TEH SURR surr	ogate solution was	added to	all sample	es <u>05</u>	W0159 D		
<u> </u>	mL of TEH_SP matrix			o all spik	es <u>051</u>	<u> </u>		
≥ 7	$75 \text{ mL of } 1+1 \text{ (CH}_2\text{Cl}_2\text{+Aceto}$	one) was added to a	.11	_		<u> 14244 </u>	<u> </u>	
		10.1		Acetor				
:	Samples were: \square sonicate	ed 3 times 🛕 place	ed on snak n off shak	ker table a ker table a	11100	1) / 13W ()		
	Extracts filtered th	take rough baked, rinse	d granul	ar red NaSC) ₄ EM	44125429		
	Extracts intered in	Concentrated to vol	umes as n	oted abov	ve V			1
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Extraction Chemist / Date

Continued an page

Reviewed by / Date

Prep Chemist: 10M Cleanup Date: 31 January

Benchbook # BK 2028

Page 88

		Initial	Final	
Sample #	Batch#	Volume (mL)	Volume (mL)	Comments
177383-008	98754	1.0	1.0	
1 -009				
-010			ļ	
-011			<u> </u>	
5 7012				
-013			ļ	
-014			<u> </u>	
-015			 	
-Olle				·
10 4 -017				
MB QC291095				
LCS J 96	V	<u> </u>	<u> </u>	
177433-001	98754	1.0	1.0	Added After Fout Biss
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Mfg & Lot # / Time / Program	Initials / Date
Extracts were cleaned up using C&T assembled 1.0 g columns TB V 33332	JOM 31 Jan 05
☐ Extracts were cleaned up using g cartridges NA	
Extracts were eluted with $4.0 \text{ mL CH}_2\text{Cl}_2$ EM44302	
Concentrated to volumes as noted above	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

Extraction Chemist / Date

Continued from page _____

Reviewed by / Date

Continued from Page	WELGHTIG)	ANALYSIS	COMMENTS
SAMPLEID			
171383-0010	30-02	8310	
	30-05		
1 -0020			
1 -0030			
-04 P	30-05		
10050	2 06		
-0000	30.00		
-0010	30.0/		
1 1 10000	30-02		
-0090	30-0/		
1 +0p0 p	30-00		
1 D/V D	30-03		
-0/2 D	29-97		
1 +0/3 b	30-0/		
-014 b	29.99		
1 -015 D	30.02		
-016 p	29 93		
1 -0/7 D	29.93		MSS
-M5D	29.93		,
-MSO'D	30-0/ 30-05 30-03		
- acs D	30-05		EM44 258
V-MB D	30-03	V	V
177883-0010	50-05	TEHM	
-002 0	49.97		
-0030	50-04		
-0010	49.96		
ma	99.97		
TOVAD	49.97		
$-e_07_0$	50.05		
0686	50-03		
-649 1	50.00		
	50-02		
-011 h	4996		
	49 9%		
-0/2 0	50.00		
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Continued from Page COMMENTS ANALYGIS WEIGHT (C) SAMPLEID 177390-00 A TEHM 50 02 50.00 -002 A -003 A 50 04 MSS 004 A 50.00 - M5 50.03 -M5D 50.02 EM44258 5004 -LCS -MB 50.04 COMP-001,002,003,004 TEHM 177 403-005 50.00 MGS/COMPA,B,C,D 800 177394-001 29.96 - M\$ 29.95 29.95 - MSD EM44758 30.00 LCS 30.00 MSS/COMP_A.B.C.D 177394-001 2998 PCB -MS 30.01 30.02 -MSD EM442 48 30.03 -4C\$ 30.02 -MB 8210 MSS/COMP ABOD 177394-001 29.98 30.00 MÇ MCD 29-95 EM 1425B 30-05 LCS 30-02 MB Continued on Page

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3) Jan 15

Read and Understood By

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Continued from Page COMMENTS ANA LYSIS WEIGHT (6) SAMPLE ID 177309-013A -014A -015A -016A 50.12 50.48 50.04 TEH M55 50.29 50.34 MSD EM49258 50.06 -MB 177433 - 001A 50.48 TEHM Continued on Page

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Signed



Curtis & Tompkins Laboratories MDL Summary for EPA 8015B Soil SHAKER TABLE

Analyte	Units	GC11A	GC13B	GC15B	GC17A
JP-5 C10-C16	mg/Kg	01/25/05 0.66	01/25/05 0.62	01/26/05 0.57	01/26/05 0.61
Jet Fuel A C10-C16	mg/Kg	01/25/04 0.66	01/25/04 0.62	01/26/04 0.57	01/26/04 0.61
Diesel C10-C20	mg/Kg		10/20/04 0.30	10/20/04 0.29	10/20/04 0.20
Diesel C10-C22	mg/Kg	10/26/04 0.57	10/20/04 0.30	10/20/04 0.30	10/20/04 0.19
Diesel C10-C24	mg/Kg	10/26/04 0.55	10/20/04 0.31	10/20/04 0.29	10/20/04 0.21
Diesel C10-C28	mg/Kg	10/26/04 0.68	10/20/04 0.32	10/20/04 0.30	10/20/04 0.40
Diesel C12-C28	mg/Kg		10/20/04 0.32		
Diesel C12-C36	mg/Kg	10/26/04 0.60	10/20/04 0.32		
Diesel C12-C32	mg/Kg			10/20/04 0.31	10/20/04 0.50
Diesel C12-C24	mg/Kg	10/26/04 0.42	10/20/04 0.31	10/20/04 0.29	10/20/04 0.21
Diesel C12-C22	mg/Kg	10/26/04 0.44	10/20/04 0.31	10/20/04 0.30	10/20/04 0.20
Motor Oil C20-C36	mg/Kg	04/06/04 2.4	04/10/04 0.65	04/10/04 0.68	03/30/04 0.32
Motor Oil C22-C36	mg/Kg	04/06/04 2.4	04/10/04 0.54	04/10/04 0.71	03/30/04 0.32
Motor Oil C24-C36	mg/Kg	04/06/04 2.4	04/10/04 0.65	04/10/04 0.80	03/30/04 0.30
Motor Oil C22-C32	mg/Kg	04/06/04 2.6	04/10/04 0.64	04/10/04 0.54	03/30/04 0.31
Hexacosane	mg/Kg	09/20/03 0.17	08/15/03 0.11	08/16/03 0.069	09/05/03 0.17

METALS



	Californ	nia Title 26 Mets	ils
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Field ID:	COMP BB3-RA/B	Batch#:	98751
Lab ID:	177403-005	Sampled:	01/28/05
Matrix:	Soil	Received:	01/28/05
Units:	mg/Kg	Prepared:	01/30/05
Basis:	dry	Analyzed:	01/31/05

Moisture:

88

Analyte	Result	RL	Diln Fac
Antimony	ND	3.1	1.000
Arsenic	3.1	0.26	1.000
Barium	400	0.52	1.000
Beryllium	0.64	0.10	1.000
Cadmium	0.37	0.26	1.000
Chromium	12	0.52	1.000
Cobalt	7.3	1.0	1.000
Copper	16	0.52	1.000
Iron	18,000	26	5.000
Lead	13	0.16	1.000
Manganese	440	0.52	1.000
Molybdenum	ND	1.0	1.000
Nickel	19	1.0	1.000
Selenium	ND	0.26	1.000
Silver	ND	0.26	1.000
Thallium	ND	0.26	1.000
Vanadium	24	0.52	1.000
Zinc	69	1.0	1.000



Batch QC Report

	Californ	nia Title 26 Meta	ils
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC281077	Batch#:	98751
Matrix:	Soil	Prepared:	01/30/05
Units:	mg/Kg	Analyzed:	01/31/05
Basis:	as received		

Analyte	Result	RI.
Antimony	ND	3.0
Arsenic	ND	0.25
Barium	ND	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	ND	1.0
Copper	ND	0.50
Iron	ND	5.0
Lead	ND	0.15
Manganese	ND	0.50
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	ND	0.25
Silver	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	ND	1.0



Batch OC Report

Baten ge kep	Colliforn	nia Title 26 Meta	ils
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#: Matrix:	2893.12	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	98751
Units:	mg/Kg	Prepared:	01/30/05
Basis:	as received	Analyzed:	01/31/05
Diln Fac:	1.000	<u>-</u>	

Type:

BS

Lab ID:

QC281078

Analyte	Spiked	Result	%REC	
Antimony	100.0	107.5	108	75-125
Arsenic Arsenic	50.00	51.00	102	75-125
Barium	100.0	97.00	97	75-125
Beryllium	2.500	2.665	107	75-125
Cadmium	10.00	9.750	98	75-125
Chromium	100.0	103.5	104	75-125
Cobalt	25.00	25.60	102	75-125
Copper	12.50	13.45	108	75-125
Iron	1,000	1,022	102	75-125
Lead	100.0	103.0	103	75-125
Manganese	25.00	25.65	103	75-125
Molybdenum	20.00	22.05	110	75-125
Nickel	25.00	24.50	98	75-125
Selenium	50.00	50.50	101	75-125
Silver	10.00	10.20	102	75-125
Thallium	50.00	48.75	98	75-125
Vanadium	25.00	26.40	106	75-125
Zinc	25.00	24.70	99	75-125

Type:

BSD

Lab ID: QC281079

Analyte	Spiked	Result	%REC	Limits	RPI) Lim
Antimony	100.0	107.5	108	75-125	0	30
Arsenic	50.00	51.00	102	75-125	0	30
Barium	100.0	96.50	97	75-125	1	30
Beryllium	2.500	2.665	107	75-125	0	30
Cadmium	10.00	9.750	98	75-125	0	30
Chromium	100.0	103.5	104	75-125	0	30
Cobalt	25.00	25.65	103	75-125	0	30
Copper	12.50	13.40	107	75-125	0	30
Iron	1,000	1,024	102	75-125	0	30
Lead	100.0	102.5	103	75-125	0	30
Manganese	25.00	25.65	103	75-125	0	30
Molybdenum	20.00	22.20	111	75-125	1	30
Nickel	25.00	24.45	98	75-125	0	30
Selenium	50.00	50.50	101	75-125	0	30
Silver	10.00	10.15	102	75-125	0	30
Thallium	50.00	49.00	98	75-125	1	30
Vanadium	25.00	26.35	105	75-125	0	30
Zinc	25.00	24.65	99	75-125	0	30 _



Batch QC Report

	Californ	nia Title 26 Meta	ils
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Field ID:	COMP BB3-RA/B	Batch#:	98751
MSS Lab ID:	177403-005	Sampled:	01/28/05
Matrix:	Soil	Received:	01/28/05
Units:	mg/Kg	Prepared:	01/30/05
Basis:	dry	Analyzed:	01/31/05
Diln Fac:	1.000		

Moisture:

88

Type: Lab ID: MS QC281080

Analyte	MSS Result	Spiked	Result	%REC	lamits.
Antimony	1.273	94.52	59.07	61 *	75-125
Arsenic	3.085	47.26	44.85	88	75-125
Barium	399.6	94.52	410.7	12 NM	75-125
Beryllium	0.6418	2.363	2.717	88	75-125
Cadmium	0.3722	9.452	7.845	79	75-125
Chromium	12.01	94.52	91.68	84	75-125
Cobalt	7.350	23.63	26.47	81	75-125
Copper	15.99	11.81	23.25	61 *	75-125
Iron	17,680	945.2	16,810 >LR	-92 NM	75-125
Lead	13.10	94.52	91.21	83	75-125
Manganese	440.5	23.63	463.1	96 NM	75-125
Molybdenum	0.7557	18.90	17.77	90	75-125
Nickel	18.63	23.63	34.64	68 *	75-125
Selenium	<0.1812	47.26	42.06	89	75-125
Silver	<0.1020	9.452	8.365	89	75-125
Thallium	<0.2202	47.26	38.14	81	75-125
Vanadium	23.55	23.63	43.71	85	75-125
Zinc	69.36	23.63	67.58	-8 *	75-125

Type: Lab ID:

MSD QC281081 Moisture: 8%

Analyte	Spiked	Result	%REC	Limits.	RPD	Lim
Antimony	98.81	65.22	65 *	75-125	6	30
Arsenic	49.41	49.16	93	75-125	5	30
Barium	98.81	438.2	39 NM	75-125	6	30
Beryllium	2.470	2.920	92	75-125	4	30
Cadmium	9.881	8.696	84	75-125	6	30
Chromium	98.81	99.80	89	75-125	5	30
Cobalt	24.70	30.39	93	75-125	10	30
Copper	12.35	25.64	78	75-125	8	30
Iron	988.1	22,390 >LR	477 NM	75-125	NC	30
Lead	98.81	98.32	86	75-125	4	30
Manganese	24.70	592.9	617 NM	75-125	24	30
Molybdenum	19.76	19.32	94	75-125	4	30
Nickel	24.70	36.76	73 *	75-125	3	30
Selenium	49.41	46.64	94	75-125	6	30
Silver	9.881	9.140	93	75-125	4	30
Thallium	49.41	41.95	85	75-125	5	30
Vanadium	24.70	47.83	98	75-125	7	30
Zinc	24.70	68.68	-3 *	75-125	0	30

^{*=} Value outside of QC limits; see narrative NC= Not Calculated NM= Not Meaningful: Sample concentration > 4X spike concentration >LR= Response exceeds instrument's linear range RPD= Relative Percent Difference Page 1 of 1



Batch QC Report

	Californ	nia Title 26 Meta	ls
Lab #:	177403	Location:	Presidio BB3
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	2893.12	Analysis:	EPA 6010B
Field ID:	COMP BB3-RA/B	Basis:	dry
Type:	Serial Dilution	Batch#:	98751
MSS Lab ID:	177403-005	Sampled:	01/28/05
Lab ID:	QC281082	Received:	01/28/05
Matrix:	Soil	Analyzed:	01/31/05
Units:	mg/Kg		

Moisture:

8%

Analyte	MSS Result	MSS RL	Result	RL	% D	iff Lim	Diln Fac
Antimony	ND	3.106	1.4 J	16		10	5.000
Arsenic	3.085	0.2588	2.6	1.3		10	5.000
Barium	399.6	0.5176	370	2.6	7	10	5.000
Beryllium	0.6418	0.1035	0.61	0.52	4	10	5.000
Cadmium	0.3722	0.2588	0.17 J	1.3		10	5.000
Chromium	12.01	0.5176	12	2.6	1	10	5.000
Cobalt	7.350	1.035	7.5	5.2	2	10	5.000
Copper	15.99	0.5176	16	2.6	0	10	5.000
Iron	17,680	25.88	19,000	130	8	10	25.00
Lead	13.10	0.1553	13	0.78	2	10	5.000
Manganese	440.5	0.5176	430	2.6	2	10	5.000
Molybdenum	ND	1.035	0.65 J	5.2		10	5.000
Nickel	18.63	1.035	19	5.2	4	10	5.000
Selenium	ND	0.2588	ND	1.3		10	5.000
Silver	ND	0.2588	ND	1.3		10	5.000
Thallium	ND	0.2588	ND	1.3		10	5.000
Vanadium	23.55	0.5176	24	2.6	1	10	5.000
Zinc	69.36	1.035	71	5.2	2	10	5.000

J= Estimated value ND= Not Detected RL= Reporting Limit Page 1 of 1

POST DIGEST SPIKE USER REPORT Curtis & Tompkins Laboratories EPA 6010B

Instid : MET07

Instid : MET07 Seqnum : 75045058028 Segnum : 75045058019 Filename : tr261604 Filename : tr261613

IDF : 1.0 IDF : 1.0 PDF : 47.62 PDF : 47.62 Run type : PDS Run type : MSS

Samplenum: 177403-005 Samplenum: QC281083

Matrix : Soil Matrix : Soil Matrix : Soil Matrix : Soil Batchnum : 98751 Batchnum : 98751 Inj : 31-JAN-2005 09:11 Inj : 31-JAN-2005 10:16

Units : uq/L

Analyte	MSS	Spike Amt		PDS	%Rec	Lim%Rec	Flags
Aluminum	*** usable	MSS data not f	found ***				
Antimony	24.60	2000		1070	52*	75-125	u
Arsenic	59.60	1000		960.0	90	75-125	u
Barium	7720	2000		8930	61*	75-125	u
Beryllium	12.40	50		55.10	85	75-125	u
Cadmium	7.190	200		176.0	84	75-125	u
Calcium	*** usable	MSS data not f	found ***				
Chromium	232.0	2000		1890	83	75-125	u
Cobalt	142.0	500		542.0	80	75-125	u
Copper	309.0	250		509.0	80	75-125	u
Iron	*** usable	MSS data not f	ound ***				
Lead	253.0	2000		1920	83	75-125	u
Magnesium	*** usable	MSS data not f	ound ***				
Manganese	8510	500		8270	-48	75-125	: u
Molybdenum	14.60	399.999999	99999		210.0) 49* 75	5-125 u
Nickel	360.0	500		756.0	79	75-125	u
Selenium	ND	1000		864.0	86	75-125	u
Silver	ND	200		174.0	87	75-125	u
Thallium	ND	1000		830.0	83	75-125	u
Vanadium	455.0	500		860.0	81	75-125	u
Zinc	1340	500		1650	62*	75-125	u
Titanium	4630	1000		4820	19	75-125	:

Method: 6010B Standard: Blank KC Run Time: 01/31/05 06:48:46

Elem	Sb2068	Sb206A	As1890	Ba4934	Be3130	Cd2265	Cr2677
Avge	004	.001	000	.001	270	.006	.000
SDev	.004	.001	.000	.000	.002	.001	.000
%RSD	116.	204.	36.2	17.9	.609	10.1	33.1
#1	001	000	000	.001	269	.005	.000
#2	007	.001	000	.001	271	.006	
Elem	Co2286	Cu3247	Pb2203	Pb220A	Mo2020	Ni2316	Se1960
Avge	000	.010	.012	.012	.001	.002	009
SDev	.000	.000	.002	.002	.000	.001	.001
%RSD	75.0	.292	12.9	14.1	55.2	45.1	9.92
#1 #2	000 001	.010 .010	.013	.013	.001	.001	010 009
Elem	Se196A	Ag3280	Tl1908	V_2924	Zn2138	A13082	Ca3179
Avge	.003	.000	003	.000	.026	.0308	.0037
SDev	.000	.001	.002	.000	.000	.0001	.0001
%RSD	11.0	5460.	78.1	107.	.217	.3430	1.265
#1 #2	.003	001 .001	005 001	.000	.026 .026	.0307 .0309	.0037 .0037
Elem Avge SDev %RSD	Fe27140009 .0002 24.57	Mg2790 .0000 .0001 92120.	Mn2576 .002 .000 11.9	Ti3349 .181 .001 .489			
#1 #2	0010 0007	0001 .0001	.002	.180 .181			

Standard: cst hi

Method: 6010B Standar Run Time: 01/31/05 06:53:22

Elem	Sb2068	Sb206A	As1890	Ba4934	Be3130	Cd2265	Cr2677
Avge	1.02	.620	.260	13.1	2.68	1.01	.213
SDev	.05	.002	.006	.3	.05	.02	.004
%RSD	4.98	.273	2.17	2.04	1.98	2.04	1.95
#1	.983	.618	.264	13.3	2.71	1.02	.216
#2	1.05	.621	.256	12.9	2.64	.992	
Elem	Co2286	Cu3247	Pb2203	Pb220A	Mo2020	Ni2316	Se1960
Avge	.670	.467	.814	.795	1.86	1.64	.285
SDev	.013	.009	.019	.009	.03	.04	.007
%RSD	1.93	1.92	2.36	1.12	1.75	2.16	2.59
#1	.680	.474	.828	.788	1.84	1.66	.291
#2	.661	.461	.800	.801	1.88	1.61	.280
Elem	Se196A	Ag3280	T11908	V_2924	Zn2138	Al3082	Ca3179
Avge	.329	.268	.180	.817	.171	.1383	.3298
SDev	.003	.005	.002	.015	.003	.0024	.0059
%RSD	.997	1.84	1.25	1.84	1.66	1.720	1.798
#1	.326	.272	.181	.827	.173	.1400	.3340
#2	.331	.265	.178	.806	.169	.1366	.3256
Elem Avge SDev %RSD	Fe2714 .1084 .0026 2.400	Mg2790 .1635 .0034 2.065	Mn2576 1.04 .02 1.80	Ti3349 6.31 .11 1.67			
#1 #2	.1102 .1065	.1659	1.05 1.03	6.39 6.24			

Report

Method: 6010B

Slope = Conc(SIR)/IR

Element Sb2068 Sb206A As1890 Ba4934 Be3130 Cd2265 Cr2677 Co2286 Cu3247 Pb2203 Pb220A Mo2020 Ni2316 Se1960 Se196A Ag3280 Tl1908 V_2924 Zn2138 Al3082 Ca3179 Fe2714 Mg2790 Mn2576 Pb sum Se sum Se sum Se sum	Wavelen 206.831 206.832 189.042 493.409 313.042 226.502 267.716 228.616 324.754 220.351 220.352 202.030 231.604 196.021 196.022 328.068 190.864 292.402 213.856 308.215 317.933 271.441 279.079 257.610 220.353 206.838 196.026	High std Multiple NONE NONE	Low std Standards NONE NONE	Slope 972.605 1583.49 1925.57 76.3609 32.7617 99.8684 938.755 747.175 437.363 624.245 632.939 537.615 305.512 1697.05 1535.88 373.458 2760.48 612.545 713.370 9476.06 6133.38 9581.69 12228.4 96.2132 1.00000 1.00000 1.00000	Y-intercept 3.55972913671 .615642078171 8.85602588717291573 .348512 -4.40018 -7.56897 -7.38513338791597759 15.8013597759 15.8013 -5.32010007255 8.01520184939 -18.7098 -291.744 -22.7003 8.49121001716159163 .000000 .000000	Date Star 01/31/05	06:53:22 06:53:22
Se sum Ti3349	196.026 334.941	NONE Multiple	Standards	163.118	-29.4493	01/31/05	06:53:22

INITIAL CALIBRATION CHECK STANDARD Curtis & Tompkins Laboratories

Instid : MET07

Run Name :

Seqnum

: 75045058001

Filename: tr261585

Injected : 31-JAN-2005 06:58
Caltype :

Standards: 04WS2257

Analyte	SpkAmt	QuantAmt			%D Flags	
Aluminum		983.0000		-2	5	
Antimony		1000.000		0	5	
Arsenic		489.0000			5	
Barium		980.0000		-2	5	
Beryllium		98.30000			5 5 5	
Cadmium		97.80000			5	
Calcium		1975.000		-1	.5	
Chromium		196.0000		-2	5	
Cobalt		491.0000		-2	5	
Copper		197.0000		-2	5	
Iron		987.0000		-1	5 5 5 5 5	
Lead		493.0000		-1	5	
Magnesium		1971.000		-1	5	
Manganese		98.40000		-2	5	
Molybdenum		997.0000		0	5 5	
Nickel		489.0000		-2	5	
Selenium		494.0000		-1		
Silver		97.70000		-2 -2	5 5	
Thallium		491.0000				
Titanium		983.0000		-2	5	
Vanadium		491.0000		-2	5	
Zinc	100.0000	97.90000	ug/ь	-2	5	

SECOND SOURCE CALIBRATION VERIFICATION Curtis & Tompkins Laboratories

Instid : MET07

Run Name :

Seqnum : 75045058002

Filename: tr261586

Injected: 31-JAN-2005 07:04

Caltype :

Standards: 05WS0014

Analyte	SpkAmt	QuantAmt			Max Fla	ags
Aluminum		494.5000		-1	10	
Antimony		546.0000		9	10	
Arsenic		249.0000		0	10	
Barium		495.0000		-1	10	
Beryllium		50.60000		1 1 3 2	10	
Cadmium		50.50000		1	10	
Calcium		1033.000		3	10	•
Chromium		102.0000			10	
Cobalt	250.0000	247.0000	ug/L	-1	10	
Copper	100.0000	105.0000	ug/L	5 3	10	
Iron		517.3000		3	. 10	
Lead		249.0000		0	10	
Magnesium		1018.000		2	10	
Manganese		49.50000		-1	10	
Molybdenum		532.0000		6	10	
Nickel		250.0000		0	10	
Selenium		249.0000		0	10	
Silver	50.00000	50.50000	ug/L	1	10	
Thallium	250.0000	244.0000	ug/L	-2	10	
Titanium		501.0000		0	10	
Vanadium	250.0000	250.0000	ug/L	0	10	
Zinc	50.00000	50.80000	ug/L	2	10	

LOW-LEVEL PERFORMANCE VERIFICATION STANDARD Curtis & Tompkins Laboratories

Instid : M

: MET07

Run Name:

Segnum : 75045058004

Filename : tr261588

Injected: 31-JAN-2005 07:16

Caltype :

Standards: 04WS2346

Analyte	SpkAmt	QuantAmt		%D	Max %D Flags	
Aluminum		101.3000		1	50	
Antimony		69.90000		17	50	
Arsenic	5.000000	3.620000	ug/L	-28		
Barium	10.00000	9.820000	ug/L	-2		
Beryllium	2.000000	1.990000	ug/L	-1	50	
Cadmium	5.000000	4.910000	ug/L	-2	50	
Calcium	200.0000	219.2000	ug/L	10	50	-
Chromium	10.00000	10.10000	ug/L	1	50	
Cobalt	20.00000	19.70000	ug/L		50	
Copper	10.00000	11.30000	ug/L	13	50	
Iron	100.0000	104.0000	ug/L	4	50	
Lead	3.000000	2.200000	ug/L	-27	50	
Magnesium	200.0000	209.0000	ug/L	5	50	
Manganese	10.00000	9.990000	ug/L	0	50	
Molybdenum	20.00000	22.70000	ug/L	14	50	
Nickel	20.00000	20.00000	ug/L	0	50	
Selenium	5.000000	6.300000	ug/L	26	50	
Silver	5.000000	4.740000	ug/L	-5	50	
Thallium	5.000000	3.060000	ug/L	-39	50	
Vanadium	10.00000	10.10000	ug/L	1	50	
Zinc		19.90000		-1	50	

Instid : MET07

Run Name :

: 1.0 IDF

Seqnum

: 75045058014

Filename: tr261598

Injected: 31-JAN-2005 08:21

Caltype :

Standards: 05WS0015

Analyte	RF/CF S	pkAmt	QuantAmt	Units	%D	Max %D Flags
Aluminum			474.8000		-5	10
Antimony	. 5	00.000	536.0000	ug/L	7	10
Arsenic	2	250.0000	247.0000	ug/L	-1	10
Barium	5	00.000	470.0000	ug/L	-6	10
Beryllium	9	0.00000	51.30000	ug/L	3	10
Cadmium	5	0.0000	48.90000	ug/L	-2	10
Calcium	1	000.000	1073.000	ug/L	7	10
Chromium	1	00.000	102.0000	ug/L	2	10
Cobalt	. 2	250.0000	250.0000	ug/L	0	10
Copper	1	00.000	105.0000	ug/L	. 5	10
Iron	5	500.000	522.6000	ug/L	5	10
Lead	2	250.0000	258.0000	ug/L	3	10
Magnesium	1	1000.000	1027.000	ug/L	. 3	10
Manganese	5	50.00000	50.00000	ug/L	0	10
Molybdenum	9	500.000	536.0000	ug/L	7	10
Nickel	2	250.0000	245.0000	ug/L	-2	10
Selenium	2	250.0000	249.0000	ug/L	0	10
Silver	5	50.00000	50.90000	ug/L	2	10
Thallium	2	250.0000	234.0000	ug/L	-6	10
Titanium			499.0000	•	0	10
Vanadium			251.0000		0	10
Zinc		50.00000	51.30000	ug/L	3	10

Instid : MET07 Run Name :

Segnum

: 75045058026

Filename : tr261611

IDF : 1.0 Injected : 31-JAN-2005 10:04

Caltype :

Standards: 04WS2419

Anslure	/CF SpkAmt	QuantAmt '	Units	%D Max	%D Flags
Analyte KF Aluminum		701.3000		-6	10
Antimony		789.0000		5	10
Arsenic		367.0000		-2	10
Barium	750.0000	722.0000	ug/L	-4	10
Beryllium	75.00000	73.20000	ug/L	-2	10
Cadmium	75.00000	73.80000	ug/L	-2	10
Calcium	1500.000	1450.000	ug/L	-3	10
Chromium	150.0000	146.0000	ug/L	-3	10
Cobalt	375.0000	357.0000	ug/L	-5	10
Copper	150.0000	150.0000	ug/L	0	10
Iron	750.0000	730.8000	ug/L	-3	10
Lead	375.0000	367.0000	ug/L	-2	10
Magnesium	1500.000	1456.000	ug/L	-3	10
Manganese	75.00000	71.60000	ug/L	-5	10
Molybdenum	750.0000	731.0000	ug/L	-3	10
Nickel	375.0000	364.0000	ug/L	-3	10
Selenium	375.0000	365.0000	ug/L	-3	10
Silver	75.00000	73.80000	ug/L	-2	10
Thallium	375.0000	353.0000	ug/L	-6	10
Titanium		724.0000		-3	10
Vanadium	375.0000	359.0000	ug/L	-4	10
Zinc	75.00000	71.60000	ug/L	-5	10

Run Name : Instid : MET07

IDF : 1.0 Injected : 31-JAN-2005 11:15 Filename : tr261623 : 75045058038 Seqnum

Caltype :

Standards: 05WS0015

Analyte R	F/CF	SpkAmt	QuantAmt	.,		
Aluminum		500.0000		-	1	10
Antimony			518.0000		4	10
Arsenic			250.0000	— 1	0	10
Barium			498.0000		0	10
Beryllium			50.10000	.	0	10
Cadmium			50.80000	 .	2	10
Calcium			1013.000	<u> </u>	1	10
Chromium			102.0000		2	10
Cobalt			246.0000		-2	10
Copper			104.0000		4	10
Iron			497.3000		-1	10
Lead			250.0000		0	10
Magnesium			1002.000		0	10
Manganese			49.20000		-2	10
Molybdenum			498.0000		0	10
Nickel			251.0000		0	10
Selenium			248.0000		-1	10
Silver			50.60000		1	10
Thallium			226.0000		-10	10
Titanium			506.0000		1	10
Vanadium			250.0000		0	10
Zinc		50.00000	50.90000	ug/L	2	10

IDF : 1.0 Injected : 31-JAN-2005 12:06

Caltype :

Standards: 04WS2419

Instrument: MET0,7

TJA Trace ICP

Segnum: 75045058003 Filename: tr261587

Run Name:

Run Type: ICB

Injected: 31-JAN-2005 07:08

Analyte	QuantAmt	*********	Units	Req Flag	ន
Aluminum	ND	100.0000		<rl< td=""><td></td></rl<>	
Antimony	ND	60.00000	<u> </u>	<rl< td=""><td></td></rl<>	
Arsenic	ND	5.000000		<rl< td=""><td></td></rl<>	
Barium	ND	10.00000	- .	<rl< td=""><td></td></rl<>	
Beryllium	ND	2.000000	ug/L	<rl< td=""><td></td></rl<>	
Cadmium	ND	5.000000		<rl< td=""><td></td></rl<>	
Calcium	ND	500.0000	ug/L	<rl< td=""><td></td></rl<>	
Chromium	ND	10.00000	\mathtt{ug}/\mathtt{L}	<rl< td=""><td></td></rl<>	
Cobalt	ND	10.00000	ug/L	<rl< td=""><td></td></rl<>	
Copper	ND	10.00000	ug/L	<rl< td=""><td>4</td></rl<>	4
Iron	ND	100.0000	ug/L	<rl< td=""><td></td></rl<>	
Lead	ND	3.000000	ug/L	<rl< td=""><td></td></rl<>	
Magnesium	ND	500.0000	ug/L	<rl< td=""><td></td></rl<>	
Manganese	ND	10.00000	ug/L	<rl< td=""><td></td></rl<>	
Molybdenum	[6.5100]	20.00000	ug/L	<rl< td=""><td></td></rl<>	
Nickel	ND	20.00000	ug/L	<rl< td=""><td></td></rl<>	
Selenium	ND.	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Silver	ND	5.000000	ug/L	<rl< td=""><td></td></rl<>	
Thallium	ND	5.000000		<rl< td=""><td></td></rl<>	
Titanium	ND	10.00000	- .	<rl< td=""><td></td></rl<>	
Vanadium	ND	10.00000		<rl< td=""><td></td></rl<>	
Zinc	ND	20.00000		<rl< td=""><td></td></rl<>	
ZITIC					

Instrument: MET07

TJA Trace ICP

Segnum: 75045058015 Filename: tr261600

Run Name:

Injected: 31-JAN-2005 08:43

Run Type: CCB

	QuantAmt	RT.	Units	Reg Flags
Aliminum	ND	100.0000		<rl< td=""></rl<>
Aluminum	ND	60.00000		<rl< td=""></rl<>
Antimony	ND	5.000000	— · .	<rl< td=""></rl<>
Arsenic	ND	10.00000	- '.	<rl< td=""></rl<>
Barium	ND	2.000000	- · .	<rl< td=""></rl<>
Beryllium	ND	5.000000		<rl< td=""></rl<>
Cadmium	[19.010]	500.0000		<rl< td=""></rl<>
Calcium	ND	10.00000		<rl< td=""></rl<>
Chromium	ND	10.00000	•	<rl< td=""></rl<>
Cobalt	ND	10.00000	•	<rl< td=""></rl<>
Copper	ND	100.0000	- .	<rl< td=""></rl<>
Iron	ND	3.000000		<rl< td=""></rl<>
Lead	ND	500.0000	— ·	<rl< td=""></rl<>
Magnesium	ND	10.00000	— ·	<rl< td=""></rl<>
Manganese	ND	20.00000	• .	<rl< td=""></rl<>
Molybdenum	ND	20.00000		<rl< td=""></rl<>
Nickel	ND	5.000000	<u> </u>	<rl< td=""></rl<>
Selenium		5.000000	<u> </u>	<rl< td=""></rl<>
Silver	ND	5.000000		<rl< td=""></rl<>
Thallium	ND	10.00000	- ' .	<rl< td=""></rl<>
Titanium	[0.5590]		_	<rl< td=""></rl<>
Vanadium	ND	10.00000		<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	< <u> </u>

Instrument: MET07

TJA Trace ICP

Segnum: 75045058027 Filename: tr261612

Run Name:

Injected: 31-JAN-2005 10:12

Run Type: CCB

Analyte	QuantAmt	RL	Units	Reg Flags
Aluminum	ND	100.0000		<rl< td=""></rl<>
Antimony	[11.300]	60.00000		<rl< td=""></rl<>
Arsenic	ND	5.000000		<rl< td=""></rl<>
Barium	ND	10.00000		<rl< td=""></rl<>
Beryllium	ND	2.000000	- .	<rl< td=""></rl<>
Cadmium	ND	5.000000	— * .	<rl< td=""></rl<>
Calcium	[18.850]	500.0000	— · .	<rl< td=""></rl<>
Chromium	ND	10.00000	- .	<rl< td=""></rl<>
Cobalt	ND	10.00000	- ' .	<rl< td=""></rl<>
1	ND	10.00000		<rl< td=""></rl<>
Copper	ND	100.0000	- '.	<rl< td=""></rl<>
Iron Lead	ND	3.000000	— ·	<rl< td=""></rl<>
Magnesium	ND	500.0000		<rl< td=""></rl<>
Manganese	ND	10.00000		<rl< td=""></rl<>
Molybdenum	[11.600]	20.00000	- .	<rl< td=""></rl<>
Nickel	ND	20.00000	-	<rl< td=""></rl<>
Selenium	ND	5.000000	₩ .	<rl< td=""></rl<>
Silver	ND	5.000000		<rl< td=""></rl<>
Thallium	ND	5.000000		<rl< td=""></rl<>
Titanium	[0.2450]	10.00000		<rl< td=""></rl<>
Vanadium	ND	10.00000		<rl< td=""></rl<>
	ND	20.00000		<rl< td=""></rl<>
Zinc	טא	20.00000	ug/ Li	(LI)

Instrument: MET07

TJA Trace ICP Run Name:

Seqnum: 75045058039 Filename: tr261624

Run Type: CCB

Injected: 31-JAN-2005 11:26

Analyte	QuantAmt		Units	Req Flags
Aluminum	ND	100.0000		<rl< td=""></rl<>
Antimony	[7.3200]	60.00000		<rl< td=""></rl<>
Arsenic	ND	5.000000	ug/L	<rl< td=""></rl<>
Barium	ND	10.00000	ug/L	<rl< td=""></rl<>
Beryllium	[0.2660]	2.000000	ug/L	<rl< td=""></rl<>
Cadmium	ND	5.000000	ug/L	<rl< td=""></rl<>
Calcium	ND	500.0000	ug/L	<rl< td=""></rl<>
Chromium	ND	10.00000	ug/L	<rl< td=""></rl<>
Cobalt	ND	10.00000	ug/L	<rl< td=""></rl<>
Copper	ND	10.00000	ug/L	<rl< td=""></rl<>
Iron	ND	100.0000	ug/L	<rl< td=""></rl<>
Lead	ND	3.000000	ug/L	<rl< td=""></rl<>
Magnesium	ND	500.0000	ug/L	<rl< td=""></rl<>
Manganese	ND	10.00000	ug/L	<rl< td=""></rl<>
Molybdenum	[3.2600]	20.00000	ug/L	<rl< td=""></rl<>
Nickel	ND	20.00000	ug/L	<rl< td=""></rl<>
Selenium	[4.8400]	5.000000	ug/L	<rl< td=""></rl<>
Silver	ND	5.000000	ug/L	<rl< td=""></rl<>
Thallium	ND	5.000000	ug/L	<rl< td=""></rl<>
Titanium	ND	10.00000	ug/L	<rl< td=""></rl<>
Vanadium	ND	10.00000	ug/L	<rl< td=""></rl<>
Zinc	ND	20.00000	ug/L	<rl< td=""></rl<>

Instrument: MET07

TJA Trace ICP

Seqnum: 75045058045 Filename: tr261630 Run Name:

Run Type: CCB

Injected: 31-JAN-2005 12:11

Aluminum	Analyte	QuantAmt	RL	Units	Req Flags
Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Molybdenum Mickel Molybdenum Nickel Selenium Silver Thallium ND SO00000 ug/L ND SO000000 ug/L ND SO00000 ug/L ND SO000000 ug/L ND SO0000000 ug/L ND SO000000 ug/L ND SO00000000 ug/L ND SO0000000 ug/L ND SO000000000000000000000000000000000000		ND	100.0000	ug/L	<rl< td=""></rl<>
Arsenic		ND		-	
Barium		ND		•	
ND 2.000000 ug/L <rl td="" ="" <=""><td></td><td>ND</td><td>10.00000</td><td>ug/L</td><td></td></rl>		ND	10.00000	ug/L	
Cadmium ND 5.000000 ug/L <rl< th=""> Calcium ND 500.0000 ug/L <rl< td=""> Chromium ND 10.00000 ug/L <rl< td=""> Cobalt ND 10.00000 ug/L <rl< td=""> Copper ND 10.00000 ug/L <rl< td=""> Iron [14.250] 100.0000 ug/L <rl< td=""> Lead [2.0100] 3.000000 ug/L <rl< td=""> Magnesium ND 10.00000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 5.000000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""> CRL ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>		ND	2.000000	ug/L	· · · · · · · · · · · · · · · · · · ·
Calcium ND 500.0000 ug/L <rl< th=""> Chromium ND 10.00000 ug/L <rl< td=""> Cobalt ND 10.00000 ug/L <rl< td=""> Copper ND 10.00000 ug/L <rl< td=""> Iron [14.250] 100.0000 ug/L <rl< td=""> Lead [2.0100] 3.000000 ug/L <rl< td=""> Magnesium [18.380] 500.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>		ND	5.000000	ug/L	
Chromium ND 10.00000 ug/L <rl< th=""> Cobalt ND 10.00000 ug/L <rl< td=""> Copper ND 10.00000 ug/L <rl< td=""> Iron [14.250] 100.0000 ug/L <rl< td=""> Lead [2.0100] 3.000000 ug/L <rl< td=""> Magnesium [18.380] 500.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 5.000000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>	l · · · · · · · · · · · · · · · · · · ·	ND			
Cobalt ND 10.00000 ug/L <rl< th=""> Copper ND 10.00000 ug/L <rl< td=""> Iron [14.250] 100.0000 ug/L <rl< td=""> Lead [2.0100] 3.000000 ug/L <rl< td=""> Magnesium [18.380] 500.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>	= -:	ND	10.00000	ug/L	
Copper ND 10.00000 ug/L <rl< td=""> Iron [14.250] 100.0000 ug/L <rl< td=""> Lead [2.0100] 3.000000 ug/L <rl< td=""> Magnesium [18.380] 500.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>		ND			
Tron		ND	10.00000	ug/L	<rl< td=""></rl<>
Lead [2.0100] 3.000000 ug/L <rl< td=""> Magnesium [18.380] 500.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<></rl<>		[14.250]	100.0000	ug/L	
Magnesium [18.380] 500.0000 ug/L <rl< td=""> Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<></rl<>		[2.0100]	3.000000	ug/L	
Manganese ND 10.00000 ug/L <rl< td=""> Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<></rl<>		[18.380]	500.0000	ug/L	<rl< td=""></rl<>
Molybdenum [4.1300] 20.00000 ug/L <rl< td=""> Nickel ND 20.00000 ug/L <rl< td=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<></rl<>		ND	10.00000	ug/L	<rl< td=""></rl<>
Nickel ND 20.00000 ug/L <rl< th=""> Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<></rl<>		[4.1300]	20.00000	ug/L	<rl< td=""></rl<>
Selenium ND 5.000000 ug/L <rl< td=""> Silver ND 5.000000 ug/L <rl< td=""> Thallium ND 5.000000 ug/L <rl< td=""></rl<></rl<></rl<>	l	ND	20.00000	ug/L	<rl< td=""></rl<>
Silver ND 5.000000 ug/L <rl 5.000000="" <r<="" <rl="" l="" nd="" td="" thallium="" ug="" =""><td></td><td>ND</td><td>5.000000</td><td>ug/L</td><td><rl< td=""></rl<></td></rl>		ND	5.000000	ug/L	<rl< td=""></rl<>
Thallium ND 5.000000 ug/L <rl< td=""><td> 10 -</td><td>ND</td><td>5.000000</td><td>ug/L</td><td><rl< td=""></rl<></td></rl<>	10 -	ND	5.000000	ug/L	<rl< td=""></rl<>
[0.7070] 10 00000 $100/T$		ND	5.000000	ug/L	
1 117 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Titanium	[0.7970]			<rl< td=""></rl<>
Vanadium ND 10.00000 ug/L <rl< td=""><td><u> </u></td><td>ND</td><td>10.00000</td><td>ug/L</td><td><rl< td=""></rl<></td></rl<>	<u> </u>	ND	10.00000	ug/L	<rl< td=""></rl<>
Zinc ND 20.00000 ug/L <rl< td=""><td></td><td>ND</td><td>20.00000</td><td>ug/L</td><td><rl< td=""></rl<></td></rl<>		ND	20.00000	ug/L	<rl< td=""></rl<>

INTERFERENCE CHECK STANDARD A Curtis & Tompkins Laboratories

Instrument: MET07

TJA Trace ICP

Run Name:

Injected: 31-JAN-2005 07:29

Seqnum: 75045058005 Filename: tr261589

Run Type: ICSA

Analyte	QuantAmt	*************	Units	Req Flags
Antimony	[10.400]	60.00000	- · .	<rl< td=""></rl<>
Arsenic	[2.9100]			<rl< td=""></rl<>
Barium	[0.0640]	10.00000	ug/L	<rl< td=""></rl<>
Beryllium	[-0.853]	2.000000	ug/L	<rl< td=""></rl<>
Cadmium	[2.9100]	5.000000	ug/L	<rl< td=""></rl<>
Chromium	[3.6100]	10.00000	ug/L	<rl< td=""></rl<>
Cobalt	[0.6490]	10.00000	ug/L	<rl< td=""></rl<>
Copper	[-0.642]	10.00000	ug/L	<rl< td=""></rl<>
Lead	[0.4230]	3.000000	ug/L	<rl< td=""></rl<>
Manganese	[2.0500]	10.00000	ug/L	<rl< td=""></rl<>
Molybdenum	[1.2500]	20.00000	ug/L	<rl< td=""></rl<>
Nickel	[2.2300]	20.00000	ug/L	<rl< td=""></rl<>
Selenium		5.000000		<rl< td=""></rl<>
Silver	[-0.437]			<rl< td=""></rl<>
Thallium		5.000000		<rl< td=""></rl<>
Titanium	-	10.00000	- · · · · · · · · · · · · · · · · · · ·	<rl< td=""></rl<>
Vanadium		10.00000		<rl< td=""></rl<>
		20.00000		<rl< td=""></rl<>
Zinc	[0.000]			

	SPIKED INTE	RFERENTS		
Analyte	SpikeAmt	QuantAmt	Units	%REC
Aluminum	50000	528400	ug/L	106
Calcium	500000	471000.	ug/L	94
Iron	200000	187400	ug/L	94
Magnesium	500000	537400	ug/L	107

INTERFERENCE CHECK STANDARD AB Curtis & Tompkins Laboratories

Instid

: MET07

Run Name :

: 75045058006 Seqnum

Filename : tr261590

Injected : 31-JAN-2005 07:33
Caltype :

Standards: 05WS0126

Analyte	SpkAmt	QuantAmt		A	Max %D Flags
Aluminum		511000.0		2	
Antimony		601.0000		20	20
Arsenic	500.0000	531.0000	ug/L	6	20
Barium	500.0000	488.0000	ug/L	-2	20
Beryllium	500.0000	509.0000	ug/L	2	20
Cadmium	1000.000	938.0000	ug/L	-6	20
Calcium	500000.0	459900.0	ug/L	- 8	•
Chromium	500.0000	482.0000	ug/L	-4	20
Cobalt	500.0000	483.0000	ug/L	-3	20
Copper	500.0000	525.0000	ug/L	5	20
Iron	200000.0	181900.0	ug/L	- 9	
Lead	1000.000	972.0000	uq/L	-3	20
Magnesium	500000.0	525500.0	uq/L	5	
Manganese	500.0000	476.0000	ug/L	 5	20
Molybdenum		522.0000		4	20
Nickel		905.0000		-10	20
Selenium	500.0000	526.0000	ug/L	5	20
Silver		1050.000		5	20
Thallium		471.0000		-6	20
Titanium		21800.00		9	
Vanadium		489.0000		-2	20
Zinc		1010.000		ī	20
ZITIC					

INTERFERENCE CHECK STANDARD AB Curtis & Tompkins Laboratories

Instid

: MET07

Run Name :

: 75045058043 Seqnum

Filename: tr261628

Injected : 31-JAN-2005 11:59
Caltype :

Standards: 05WS0126

Analyte	SpkAmt	QuantAmt		and the first of the second se	ax %D Fla	gs
Aluminum		489000.0		-2		
Antimony		557.0000		11	20	
Arsenic		518.0000		4	20	
Barium		486.0000		-3	20	
Beryllium		488.0000		-2	20	
Cadmium		930.0000		-7	20	
Calcium		432000.0		-14		•
Chromium		466.0000		-7	20	
Cobalt		463.0000		-7	20	
Copper		503.0000		1	20	
Iron		174100.0		-13		
Lead		938.0000		-6	20	
Magnesium		503300.0		1	0.0	
Manganese		457.0000		-9	20	
Molybdenum		491.0000		-2	20	
Nickel		895.0000		-11	20	
Selenium		519.0000		4	20	
Silver		1010.000		1	20	
Thallium		464.0000		- 7	20	
Titanium	20000.00			6		
Vanadium		472.0000		-6	20	
Zinc	1000.000	988.0000	ug/L	-1_	20	

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Instrument: MET07 Seguence: 75045058 Instrum Analytical Method: EPA 6010B

TJA Trace ICP SOP Version: 6010B_rv7

Begun: 31-JAN-2005

Filename Type	Samplenum	Batch	Matrix	Batch Matrix Analyzed	IDF	PDF	IQC SPK uL	Stds Used	>LR
tr261585 CS				31-JAN-2005 0	6:58 1.0	1.0		1	
tr261586 ICV				31-JAN-2005 0	7:04 1.0	1.0		2	
tr261587 ICB				31-JAN-2005 0	7:08 1.0	1.0			
tr261588 CRI				31-JAN-2005 0	7:16 1.0	1.0		3	
tr261589 ICSA				31-JAN-2005 0	7:29 1.0	1.0		4 4	4:MG=537400
tr261590 ICSAB				31-JAN-2005 0	7:33 1.0	1.0		5 5	:MG=525500
tr261591 BS	QC281005	98731	WET Le	31-JAN-2005 0	7:40 1.0	1.0			
tr261592 BSD	QC281006	98731	WET Le	31-JAN-2005 0	7:44 1.0	1.0			
tr261593 BLANK	QC281004	98731	WET Le	31-JAN-2005 0	7:50 10.0	5.0			
tr261594 MSS	177355-001	98731	WET Le	31-JAN-2005 0	7:54 10.0	5.0			
tr261595 SDUP	QC281007	98731	WET Le	31-JAN-2005 0	7:59 1	5.0			
tr261596 SSPIKE	QC281.008	98731	WET Le	31-JAN-2005 0	08:03 10.0	5.0			
tr261597 SAMPLE	177359-010	98731	WET Le	31-JAN-2005 0	08:13 10.0	5.0			
tr261598 CCV				31-JAN-2005 0	8:21 1.0	1.0		9	
0159tr261600 CCB				31-JAN-2005 0	18:43 1.0	1.0			
tr261601 BLANK	QC281077	98751	Soil	31-JAN-2005 0	8:53 1.0	50.0			
tr261602 BS	QC281078	98751	Soil	31-JAN-2005 0	03:01 1.0	50.0			
tr261603 BSD	QC281079	98751	Soil	31-JAN-2005 0	09:05 1.0	50.0			
tr261604 MSS	177403-005	98751	Soil	31-JAN-2005 0	09:11 1.0	47.62	4	4	:CA=459600
tr261605 SER	QC281082	98751	Soil	31-JAN-2005 0	9:17 5.0	47.62			
tr261606 SER	QC281082	98751	Soil	31-JAN-2005 0	9:21 5.0	47.62			
tr261607 MSS	177403-005	98751	Soil	31-JAN-2005 0	9:26 5.0	47.62	н		
tr261608 SER	QC281082	98751	Soil	31-JAN-2005 0	9:39 25.0	47.62	7		
tr261609 MS	QC281080	98751	Soil	31-JAN-2005 0	9:44 1.0	43.48	Н	4	:CA=567600
tr261610 MSD	QC281081	98751	Soil	31-JAN-2005 0	09:48 1.0	45.45	7	4	:FE=453200
tr261611 CCV				31-JAN-2005 1	10:04 1.0	1.0		7	
tr261612 CCB				31-JAN-2005 1	10:12 1.0	1.0			
tr261613 PDS	QC281083	98751	Soil	31-JAN-2005 1	10:16 1.0	47.62	4	8 9	:CA=425400
tr261614 SAMPLE	177395-001	98751	Miscel	31-JAN-2005 1	10:32 1.0	50.51			
tr261615 SAMPLE	177406-001	98751	Soil	31-JAN-2005 1	10:37 1.0	45.05		2	:FE=218700
tr261616 SAMPLE	177306-012	98719	Water	31-JAN-2005 1	10:42 1.0	1.0		-	

Stds used: 1=04WS2257 2=05WS0014 3=04WS2346 4=04WS2355 5=05WS0126 6=05WS0015 7=04WS2419 8=04SS171 9=04SS172

Analyst: CPage 1 of 2

Date:

SEQUENCE SUMMARY Curtis & Tompkins Laboratories

Sequence: 75045058 Instrument: MET07 TJ Analytical Method: EPA 6010B

TJA Trace ICP SOP Version: 6010B_rv7

Begun: 31-JAN-2005

>LR		1:ZN=24200.0			1:PB=130000							5:MG=503300		
Stds Used							9					5	17	
IQC SPK uL														
PDF	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Batch Matrix Analyzed IDF	Water 31-JAN-2005 10:47 1.0	31-JAN-2005 10:51 1.0	31-JAN-2005 10:56 1.0	31-JAN-2005 11:00 1.0	31-JAN-2005 11:04 1.0	31-JAN-2005 11:09 1.0	31-JAN-2005 11:15 1.0	31-JAN-2005 11:26 1.0	31-JAN-2005 11:45 5.0	31-JAN-2005 11:49 1.0	31-JAN-2005 11:53 1.0	31-JAN-2005 11:59 1.0	31-JAN-2005 12:06 1.0	31-JAN-2005 12:11 1.0
Matrix	Water	Water	Water	Water	Water	Water			98719 Water	Water	Water			-
Batch	98719	98719	98719	98719	98719	98719			98719	98719	98719			
Samplenum	177306-013	177306-014	177306-015	177306-016	177306-017	177306-018			177306-017	177306-019	177306-020			
# Filename Type	032 tr261617 SAMPLE	033 tr261618 SAMPLE	034 tr261619 SAMPLE	035 tr261620 SAMPLE	036 tr261621 SAMPLE	037 tr261622 SAMPLE	038 tr261623 CCV	039 tr261624 CCB	040 tr261625 SAMPLE	041 tr261626 SAMPLE	042 tr261627 SAMPLE	043 tr261628 ICSAB	044 tr261629 CCV	045 tr261630 CCB

77

Stds used: 1=04W52257 2=05WS0014 3=04WS2346 4=04WS2355 5=05WS0126 6=05WS0015 7=04WS2419 8=04SS171 9=04SS172

Analyst: A (allyn Date: Page 2 of 2



REPORTING SUMMARY FOR 177403 METALS Soil Curtis & Tompkins Laboratories

					S	A	В	В	C	CIC	3 0	F	P	М	M	Ν	S	A	T	V	Z	
Lab ID	Inst ID	Analyzed		IDF	B	S	A	Ε	D	R) [C	J Ε	B	N	0	I	E	G	L		N	
177403-005	MET07	01/31/05	09:11	1.0	+	+	+	+	+	+ -	+ +	٠Ţ	+	+	+	+	+	+	+	+	+	
177403-005	MET07	01/31/05	09:26	5.0	1							+	 					: -				l
QC281077	MET07	01/31/05	08:53	1.0	 + 	 + 	 	+	+	+ -	F 4	 - - 	 + 	 +	 + 	+	 	+	+	+	Ŧ	
QC281078	MET07	01/31/05	09:01	1.0	 + 	 	 	1	4	+ -	F] J	 - 	 + 	 	 + 	+	 + 	+	4 	+	+	
QC281079	MET07	01/31/05	09:05	1.0	 + 	4	 +	+	+	+ -	F H	 - 	 + 	 + 	 	+	 	+	+	+	+	
QC281080	MET07	01/31/05	09:44	1.0	 + 	+	 	+	+	+ -	F J +	 - 	 + 	, + 	 + 	+	 	+	+	+	+	
QC281081	MET07	01/31/05	09:48	1.0		+	 	Ŧ	4 -	+ - 	۲ ا	F 1	 + 	 + 	 + 	+	 	+	+	+	+	
QC281082	MET07		09:17		+	 + 	+	¥	+	+	4		+		 + 	+		+	+	+	+	
QC281082 QC281082	MET07 MET07	01/31/05 01/31/05	09:21 09:39	90-019-40-019-00-00-00-01-01-0-1-0-1-0-1-0-1-0-1		 						 + 					+ 					
QC281083	MET07	01/31/05	10:16	1.0	 +	 	 	+	+	+ -	 - 	 - - -	 +	+	 +	+	+	+ 	+	+	+	

:11	171	
31-JAN-2005 09:11	. 0488171 : 0488172 :	
31-JAN-	Spike #1 ID Spike #2 ID Spike #3 ID	
Sample Preparation Summary	Analysis : N/A Bgroup : ICAP Units : g Clean-up :	
Curtis & Tompkins Laboratories	Batch Number : 98751 Date Extracted: 30-JAN-2005 Extracted by : Victor Vergara Prep Method : 3050B	

Clean Comments Method		mss								
Clean Method										
Clean pH Sp 1 Sp 2 Sp 3 Analyses D.F. Vol Vol Vol	Λ	T26/ICP	T26/ICP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP
Sp 2 Sp Vol Vol					ď.	ī.	ī,	3.		
Sp 1 Vol					٦.	'n.	s.	5.		
Clean pH D.F.	T.	1	. 1	1	. 1	1	1	1	1	1
	50.505051	47.619048	45.045045	50.000000	50.000000	50.000000	43.478261	45.454545	47.619048	47.619048
Final Vol	50	20	20	20	20	20	50	20	50	20
Units	Б	מ	מ	מ	מ	ש	מ	b	D)	מ
Init Units Final Prep W/V Vol D.F.	66.	1.05	1.11	н	-		1.15	1.1	1.05	1.05
Matrix	Miscell.	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
	s Company	0110	0110							
Client	ConocoPhillips Company	Treadwell & Rollo	Treadwell & Rollo				10	10	t n	10
							of 177403-005	of 177403-005	of 177403-005	of 177403-005
Тұре				BLANK	BS	BSD	MS	MSD	SER	PDS
Sample	177395-001	177403-005	177406-001	QC281077	QC281078	QC281079	QC281080	QC281081	QC281082	QC281083

lyn Date: 1/31 Date: / Ungared Reviewed By: Klan Received By: Prep Chemist: Al Mas Relinguished By: $\mathcal{H}_{\mathcal{L}}$ LIMS Batch #: 98751

Date Digested: 112805

Digested by:

BK 2057 Page 49

Weight of Final Filtered? Sample # and letter Sample (g) Volume (mL) (y/n)Comments BIK DC 281077 50.0 281078 177403-005 MS - 005 WSD 10 17395-001 0.99 comp 3 yars 77406-001 1-11 177403-005 1.05 comp 001-002-003-004-20

	digestion temperature (90 - 95 degrees C)
0.5	mL of spike solution was added to all spikes

1:1 HNO3

concentrated HNO3

3mL 30% hydrogen peroxide

concentrated HCl

🖾 filtered thru' Whatman # 541

95°C	W1/28	D5
0455171*	I - I	
0455177*		
A27061-017705		
A27061- Maker		
43297404 - VWR		
AH3DH7. MBaker		
K151/057		

Reagent ID or LIMS #

Extraction Chemist / Date

Reviewed by / Date

Initials / Date



Curtis & Tompkins Laboratories MDL Summary for EPA 6010B Soil 3050B

Analyte	Units	MET01	MET07	METOS A	METO8 R
Aluminum	mg/Kg	07/26/04 1.5	07/21/04 0.52		09/10/04 1.3
Antimony	mg/Kg	07/20/04 1.3	07/21/04 0.20	09/10/04 0.076	
Arsenic	mg/Kg	07/26/04 2.8	07/20/04 0.10	09/10/04 0.10	
Barium	mg/Kg	07/27/04 0.098	07/21/04 0.013	09/17/04 0.032	09/10/04 0.033
Beryllium	mg/Kg	07/20/04 0.029	07/21/04 0.0063	09/10/04 0.0056	
Cadmium	mg/Kg	07/20/04 0.14	07/21/04 0.028	09/10/04 0.0076	
Calcium	mg/Kg	07/26/04 2.8	07/21/04 0.58		09/10/04 1.5
Chromium	mg/Kg	07/20/04 0.29	07/21/04 0.033	09/10/04 0.013	
Cobalt	mg/Kg	07/20/04 0.39	07/21/04 0.076	09/10/04 0.0087	
Copper	mg/Kg	07/20/04 0.11	07/21/04 0.057	09/10/04 0.069	
Iron	mg/Kg	07/20/04 1.5	07/21/04 0.80		09/10/04 0.33
Lead	mg/Kg	07/26/04 7.9	07/20/04 0.065	09/10/04 0.078	
Magnesium	mg/Kg	07/20/04 1.5	07/21/04 0.52		09/10/04 1.2
Manganese	mg/Kg	07/20/04 0.11	07/20/04 0.11	09/17/04 0.028	09/10/04 0.023
Molybdenum	mg/Kg	07/20/04 0.43	07/21/04 0.062	09/10/04 0.062	
Nickel	mg/Kg	07/20/04 0.64	07/21/04 0.067	09/10/04 0.026	
Potassium	mg/Kg	07/27/04 18			09/17/04 3.7
Selenium	mg/Kg	07/27/04 8.1	07/21/04 0.17	09/10/04 0.18	
Silver	mg/Kg	07/26/04 0.18	07/21/04 0.098	09/10/04 0.035	
Sodium	mg/Kg	07/26/04 2.8			09/17/04 3.2
Thallium	mg/Kg	07/26/04 9.5	07/21/04 0.21	09/10/04 0.17	
Vanadium	mg/Kg	07/20/04 0.14	07/21/04 0.045	09/10/04 0.039	
Zinc	mg/Kg	07/20/04 0.17	07/21/04 0.17	09/17/04 0.14	09/10/04 0.091
Boron	mg/Kg	07/27/04 3.1		09/17/04 0.32	
Tin	mg/Kg	07/26/04 1.0		09/17/04 0.085	
Titanium	mg/Kg	07/26/04 0.099		09/17/04 0.079	09/17/04 0.068



MOISTURE DATA

Percent Moisture Summary Report

Batch: 98832 Date: 02/03/05 Method: CLP SOW 390

Analyst: RSM

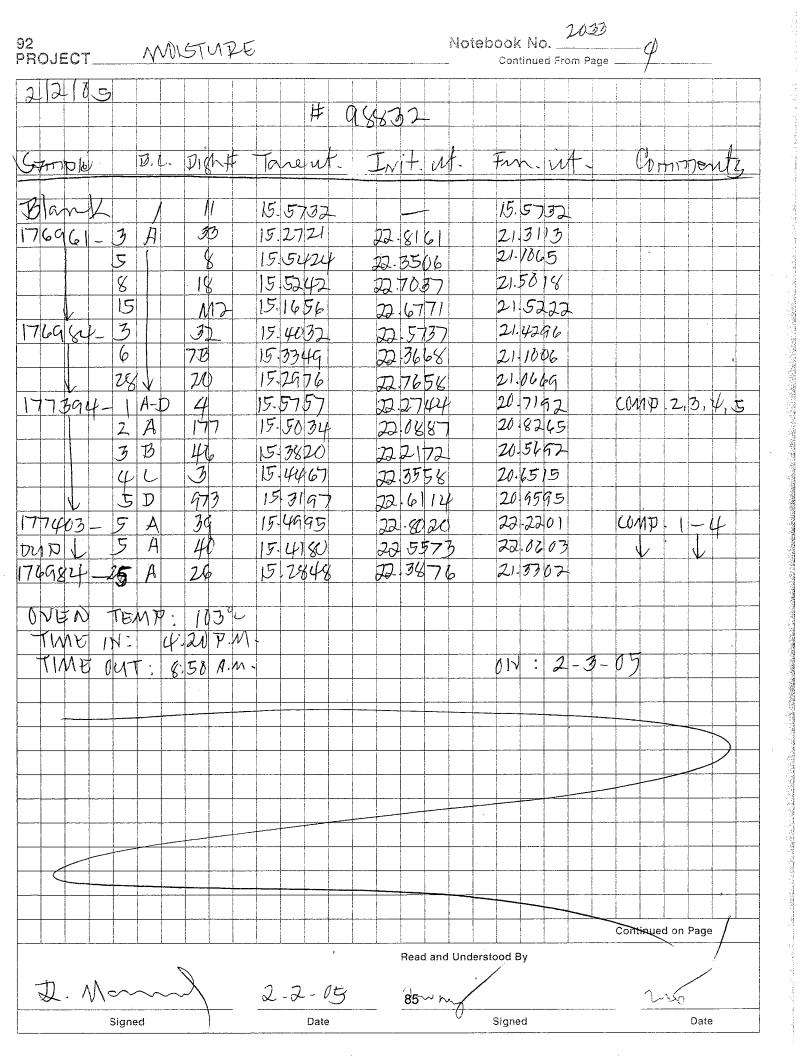
				Percent	Percent	
Sample	Tare (g)	Wet (g)	Dry (g)	Solids N	Moisture	
176961-003	15.2721	22.8161	21.3113	80	20	
176961-005	15.5424	22.3506	21.1065	82	18	
176961-008	15.5242	22.7037	21.5018	83	17	
176961-015	15.1656	22.6771	21.5222	85	15	
176984-003	15.4032	22.5737	21.4296	84	16	
176984-006	15.3349	22.3668	21.1006	82	18	
176984-025	15.2848	22.3876	21.3302	85	15	
176984-028	15.2976	22.7658	21.0669	77	23	
177394-001	15.5757	22.2744	20.7192	77	23	
177394-002	15.5034	22.0887	20.8265	81	19	
177394-003	15.3820	22.2172	20.5692	76	24	
177394-004	15.4467	22.3558	20.6515	75	25	
177394-005	15.3197	22.6114	20.9595	77	23	
177403-005	15.4995	22.8020	22.2201	92	8	
QC281391	15.4180	22.5573	22.0603	93	7	
of 177403-00	5		RPD:	1.1%	13.5%	

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 98832

Analysis : MOISTURE Bgroup : N/A Department : Metals Date Started: 02-FEB-2005 Batched by : Rodellio S. Manuel

Sample Type	Client	Matrix	Analyses	Due Date
176961-003	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
176961-005	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
176961-008	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
176961-015	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
176984-003	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
176984-006	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
176984-025	Ninyo & Moore	Soil	MOİSTURE	09-FEB-2005
176984-028	Ninyo & Moore	Soil	MOISTURE	03-FEB-2005
177394-001	Montezuma Wetlands	Soil	MOISTURE	03-FEB-2005
177394-002	Montezuma Wetlands	Soil	MOISTURE	03-FEB-2005
177394-003	Montezuma Wetlands	Soil	MOISTURE	03-FEB-2005
177394-004	Montezuma Wetlands	Soil	MOISTURE	03-FEB-2005
177394-005	Montezuma Wetlands	Soil	MOISTURE	03-FEB-2005
177403-005	Treadwell & Rollo	Soil	MOISTURE	04-FEB-2005
QC281391 SDUP of 177403	-005	Soil	MOISTURE	



CURTIS & TOMPKINS

QA/QC TEMPERATURE MONITOR

MONTH/YEAR Jan. 3, 05

°C DATE			°C	DATE	INITTAL
103 01 03/05	pus		1050	01-31-05	DSN
105c 01/04/05	ZSM		10402	02-01-05	
104 01/05/05	Ran	,	10300	02.02.05	DEN
10300 01/06/05	REM		104°V	02-03-05	DSM
10300 01/07/05	RGM				
10300 01/10/05	PEN				·.
10300 01/11/05	· Ron				
104 01/12/05	26m				
10300 01/13/05	Rism				
1030 01/14/25	DSM				
104401/17/09	PSM			j	
1030 01 18 65	M				
1030 01/19/05	Fon				
1030 01/20/20	DSM				
10304 01/21/05	RSM	¥			
10300 01/22/05	DSM				7
105" 01/24/05	RSM.				
1040 01/25/05	Bery.				
10400 01/26/05/	RSM				1
1030 01/27/05	DSM				<u> </u>
1054 01/28/25	BEN		1		

DATE 0.2000 1.0000 10.0000 50.0000 INITIAL 01-12-05 0.2000 1.0000 10.000 50.0003 DSM 01-13-05 0.2000 1.000 10.0000 50.0003 DSM 01-14-05 0.2001 1.0000 10.0000 50.0003 DSM 01-17-05 0.2000 1.0001 10.0000 50.0003 DSM 01-17-05 0.2000 1.0001 10.0000 50.0003 DSM 01-19-05 0.2000 1.000 10.0000 50.0003 DSM	
01-13-65 0.2000 .0000 0.000 50.0003 DSM 01-14-05 0.2001 .0000 0.0000 0.0003 DSM 01-17-05 0.2000 .0001 0.0000 50.0003 DSM 0(-18-0) 0.2000 .0001 0.0000 50.0003 DSM	
01-19-05 0.2000 1.0000 10.0001 50.0002 Mg 01-20-05 0.2000 1.0000 10.0000 50.0003 RgM 01-21-05 0.2000 1.0000 10.0000 50.0003 RgM 01-22-05 0.2000 1.0000 10.0000 50.0003 RgM 01-25-05 0.2000 1.0000 10.000 50.0003 RgM 01-26-05 0.2000 1.0000 10.000 50.0000 FgM 01-26-05 0.2000 1.0000 10.000 50.0000 FgM 01-26-05 0.2000 1.0000 10.000 50.0000 FgM 01-27-05 0.2000 1.0000 10.000 50.0000 FgM 01-28-05 0.2000 1.0000 10.000 50.0004 RgM 01-31-09 0.2000 1.0000 10.000 50.0000 FgM 02-01-05 0.2000 1.0000 10.000 50.0000 FgM 02-01-05 0.2000 1.0000 10.000 50.0000 FgM 02-03-05 0.2000 1.0000 10.0000 50.0000 FgM 02-03-05 0.2000 1.0000 10.0000 50.0000 FgM	35298 35298 35298 35298 35298 35298 35298 35298 35298 35298 35298 35298 35298 35298 35298

Continued on Page

Read and Understood By

Q. Marring

01-12-05 Date

ANALYTICAL REPORT

Job Number: 720-1025-1

Job Description: Soil Composite BB3 408

For:

Performance Excavators Inc 103 Shoreline Parkway Second Floor San Rafael, CA 94901-5521

Attention: Mr. Cliff Busekist

Surviver Sidh

Surinder Sidhu Project Manager 1 ssidhu@stl-inc.com 12/21/2005

METHOD SUMMARY

Client: Performance Excavators Inc

Job Number: 720-1025-1

Description		Lab Location	Method		Preparation Method	
Matrix:	Solid					
Nonhalogen	ated Organics using GC/FID -Modified (Diesel	STL-SF	SW846	8015B		
	inics) Ultrasonic Extraction Silica Gel Cleanup	STL-SF STL-SF			SW846 SW846	3550B 3630C
	rine Pesticides by Gas Chromatography Ultrasonic Extraction	STL-SF STL-SF	SV/846	8081A	SW846	3550B
Inductively (Coupled Plasma - Atomic Emission Spectrometry Acid Digestion of Sediments, Sludges, and Soils	STL-SF STL-SF	SVV646	E01CE	SW346	30508
Mercury in :	Solid or Semisplid Waste (Manual Cold Vapor	\$TL-\$F	SW845	74714	4	
Technique)	Mercury in Solid or Semi-Solid Waste (Manual	STL-SF			SW846	7471A

LAB REFERENCES:

STL-SF = STL-San Francisco

METHOD REFERENCES:

SWB46 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Performance Excavators Inc

Job Number: 720-1025-1

t - b Commis ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Receivéd
Lab Sample ID	Client Campic to		1500	12/15/2005 1815
720-1025-5	BB3A/B COMP2	S olid	12/14/2005 1500	12/19/2003 1010

Analytical Data

Job Number: 720-1025-1

Client: Performance Excavators Inc

Client Sample ID:

BB3A/B COMP2

Lab Sample 10:

720-1025-5

Client Matrix:

Solid

Date Sampled: 12/14/2005 1500

Date Received: 12/15/2005 1815

		/Discal Pagge C	Tranics)
BRASE Monhalogenated Organics Using	GC/FID -Modities	(Disset varies of	,,9,,,,,,,,

Method:

8015B

Analysis Batch: 720-3234

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

Prep Batch: 720-3145

Initial Weight/Volume: Final Weight/Volume: 30.15 g 5 mL

Dilution: Date Analyzed: 12/19/2005 0831

1.0

Date Prepared: 12/16/2005 1028

Injection Volume: Column ID:

PRIMARY

DryWt Corrected: N Analyte Diesel Range Organics [C10-C28]

Result (mg/Kg) Qualifier 7.4

1.0 50

Motor Oil Range Organics [C24-C36]

NĎ %Rec

Acceptance Limits

Surrogate o-Terphenyl

63

Analytical Data

Job Number: 720-1025-1

Client: Performance Excavators Inc.

Client Sample ID:

BB3A/B COMP2

Lab Sample ID.

720-1025-5

Client Matrix:

Solid

Date Sampled: 12/14/2005 1500

Date Received: 12/15/2005 1815

8081 A Organochlorine	Pesticides by	Gas Chromatography
-----------------------	---------------	--------------------

Method:

8081A

Analysis Batch: 720-3372

Instrument ID: Varian Pest 2

Preparation:

3550B

N/A Lab File ID:

Dilution:

Prep Batch: 720-3277

30.42 g

Date Analyzed:

1.0

initial Weight/Volume: Final Weight/Volume:

10 mL

Date Prepared

12/20/2005 1822 12/19/2005 1557

Injection Volume: Column ID:

PRIMARY

Analyte	DryWt Corrected: N Result (ug/Kg)	Qualifier	RL		
Aldrin	ND		2 0		
Dieidrin	ND		2.0		
Endrin aldehyde	ND		2.0		
Endrin	ND		2.0		
Endrin ketone	ND		2.0		
	NĎ		2.0		
Heptachlor	ND		2.0		
Heptachlor epoxide	ND		2.0		
4.4-DDT	ND		2.3		
4,4-DDE 4,4-DDD	ND		2.5		
•,	ND		2.0		
Endosulfan I	ND		2.0		
Endosulfan il	ND		2.0		
alpha-BHC	ND		2.0		
beta-BHC	ND		2.0		
gamma-BHC (Lindane)	ND		2.0		
delta-BHC	ND		2.0		
Endosulfan sulfate	ND		2.0		
Methoxychlor	ND		99		
Toxaphene	ND		49		
Chlordane (technical)	ND ND		20		
alpha-Chlordane	ND		2.0		
gamma-Chlordane	NO				
Surrogate	%Rec	The second secon	ceptance Limits		
Tetrachioro-m-xylene	1C5		50 - 125		
DCB Decachlorobiphenyl	90	4	16 - 142		

Analytical Data

Job Number: 720-1025-1

Client: Performance Excavators Inc

Client Sample ID: BB3A/B COMP2

Lab Sample ID:

720-1025-5

Client Matrix:

Solid

Date Sampled:

12/14/2005 1500

Date Received:

12/15/2005 1815

5010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method:

6010B

Analysis Batch: 720-3334

Instrument ID:

Varian ICP

Preparation:

3050B

Prep Batch, 720-3289

Lab File ID:

NA

Dilution:

1.0

Initial Weight/Volume Final Weight/Volume: 1.01 g 50 mL

Date Analyzed: 12/20/2005 1355 Date Prepared:

12/20/2005 0739

lec Beach Duc

Ves Bid /Ore

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.99
Silver		ND -		0.99
Arsenic		4.7		0.99
Barium		190		0.50
Beryllium		ND		0.50
Cadmium		0.95	•	0 99
Cobalt		5.8		0.99
Chromium		6.1		0.99
Copper		140		9.9
ìron		1500C NA		0.99
Molybdenum		1.3		0.99
Nickel		14		0.99
Lead		9.5		2.0
Antimony		2 8		2.0
Selenium		ND		C.99
Thailium		CN		C.99

7471A Mercury In Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method:

Dilution:

Vanadium

Zinç

7471A

747:A Preparation:

10

Date Analyzed: 12/20/2005 1115 Date Prepared: 12/19/2005 1455

Analysis Batch: 720-3304

Prep Batch: 720-3264

Instrument ID: Lab File ID:

FIMS 100 N/A

Initial Weight/Volume:

1.00 g 50 mL

0.99

Final Weight/Volume:

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Mercury

0.50

DATA REPORTING QUALIFIERS

Lab Section Qualifier Description

Client: Performance Excavators Inc.

Job Number: 720-1025-1

QC Association Summary

Lab Sample ID	Cilent Sample ID	Client Matrix	Method	Prep Batch
GC Semi VOA				
Prep Batch: 720-3145 LCS 720-3145/2-B LCSD 720-3145/3-B MB 720-3145/1-B 720-1025-5	Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid Solid	3550B 3550B 3550B 3550B	
Prep Batch: 720-3277 LCS 720-3277/2-A LCSD 720-3277/3-A MB 720-3277/1-A 720-1025-5	Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid	3550B 3550B 3550B 3550B	
Analysis Batch:720-3 LCS 720-3145/2-B LCSD 720-3145/3-B MB 720-3145/1-B 720-1025-5	Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid Solid	8015B 8015E 8C15B 8C15B	720-3145 720-3145 720-3145 720-3145
Analysis Batch:720-5 LCS 720-3277/2-A LCSD 720-3277/3-A MB 720-3277/1-A 720-1025-5	Lab Control Spike Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid Solid	8081A 8081A 8081A 8081A	720-3277 720-3277 720-3277 720-3277

Client: Performance Excavators Inc.

Job Number: 720-1025-1

QC Association Summary

Lab Sample ID	Cilent Sample ID	Client Matrix	Method	Prep Batch
Metals				
Prep Batch: 720-3264 LCS 720-3264/2-A LCSD 720-3264/3-A MB 720-3264/1-A 720-1025-5	Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid Solid	7471A 7471A 7471A 7471A	
Prep Batch: 720-3289 LCS 720-3285/2-A LCSD 720-3289/3-A MB 720-3289/1-A 720-1025-5	Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid Solid	3050B 3050B 3050B 3050B	
Analysis Batch:720-3 LCS 720-3264/2-A LCSD 720-3264/3-A MB 720-3264/1-A 720-1025-5	Lab Control Spike Lab Control Spike Lab Control Spike Duplicate Method Blank BB3A/B COMP2	Solid Solid Solid Solid	7471A 7471A 7471A 7471A	720-3264 720-3264 720-3264 720-3264
Analysis Batch:720-3 LCS 720-3269/2-A LCSD 720-3289/3-A MB 720-3289/1-A 720-1025-5	Lab Control Spike Lab Control Spike Lab Control Spike Duplicate Method Biank BB3A/B COMP2	Solid Solid Solid Solid	6010B 6010B 6010B 6010B	720-3289 720-3289 720-3289 720-3289

Job Number: 720-1025-1

Method Blank - Batch: 720-3145

Client: Performance Excavators inc

Method: 8015B Preparation: 3550B

Lab Sample ID: MB 720-3145/1-3

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 12/17/2005 0816 Date Prepared: 12/16/2005 1028 Analysis Batch: 720-3234 Prep Batch: 720-3145

Units: mg/Kg

Instrument ID: HP DRO3 Lab File ID N/A

Initial Weight/Volume: 30.22 g Final Weight/Volume: 5 ml.

Injection Volume:

Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]	ND NO	and a second of the second was required and the second and the sec	0.99 50
Surrogate	% Rec	Acceptance Limits	
o-Terpheny!	68	60 - 13 0	

Laboratory Control/

Laboratory Control Duplicate Recovery Report - Batch: 720-3145

Method: 8015B Preparation: 3550B

LCS Lab Sample ID: LCS 720-3145/2-B

Client Matrix:

Dilution:

Date Analyzed:

Date Prepared:

Solid 1.0

10

Dilution: Date Analyzed:

Date Prepared:

12/17/2005 2043

12/17/2005 2110

12/16/2005 1028

12/16/2005 1028

Units: mg/Kg

Analysis Batch. 720-3234

Prep Batch: 720-3145

Analysis Batch: 720-3234

Units: mg/Kg

Instrument ID: HP DRO3

Lab File ID: N/A

Initial Weight/Volume 30.14 g Final Weight/Volume: 5 mL Injection Volume:

Column ID:

PRIMARY

Instrument ID. HP DRO3 LCSD Lab Sample ID: LCSD 720-3145/3-B Lab File ID: N/A Client Matrix: Solid

Prep Batch: 720-3145

Initial Weight/Volume: 30.35 g Final Weight/Volume: 5 mL

Injection Volume:

Column ID: PRIMARY

Analyte	LCS 2	6 Rec. LCSD	Limit	RPD			LCSD Qual
Diesel Range Organics [C10-C28]	99	93	60 - 130	7	30		agence or no other artists
Surrogate	<u>.</u> L	CS % Rec	LCSD %	Rec		tance Limits	
o-Terphenyl	7	'8	79		6	0 - 130	

Client. Performance Excavators Inc.

Job Number: 720-1025-1

Method Blank - Batch: 720-3277

Method: 8081A Preparation: 3550B

Lab Sample ID: MB 720-3277/1-A

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 12/20/2005 1157 Date Prepared: 12/19/2005 1557

Analysis Batch: 720-3372

Prep Batch: 720-3277

Units: ug/Kg

Instrument ID: Varian Pest 2

Lab File ID: N/A

initial Weight/Volume: 30.01 g Final Weight/Volume: 10 mL

Injection Volume:

PRIMARY Column ID:

Analyte	Result	Qua!	RL
Aldrin	ND	The second of th	2.0
Dielorin	ND		2.0
Endrin aldehyde	ND		2.0
Endrin	ND		2.0
Endrin ketone	ND		2.0
Heptachior	ND		2.0
Heptachlor epoxide	ND		2.0
4.4'-DDT	ND		2.0
4,4'-DDE	NĎ		2.0
4,4'-DDD	ND		2.0
Endosulfan!	ND		2.0
Endosulfan II	ND		2.0
alpha-BHC	ND		2.0
beta-BHC	ND		2.0
gamma-BHC (Lindane)	ND		2.0
delta-BHC	ND		2.0
Endosulfan sulfate	ДИ		2.0
Methoxychlor	ND		2.0
Toxaphene	ND		109
Chlordane (technical)	ND		50
alpha-Chlordane	ND		2.0
gamma-Chlordane	ND		2.0
Surrogate	% Rec	Acceptance Limits	and a company process, were supplied to the accompany of
Tetrachipro-m-xylene	88	50 - 125	
DCB Decachlorobiphenyl	80	46 - 142	

Job Number: 720-1025-1

Client: Performance Excavators Inc.

Laboratory Control/

Laboratory Control Duplicate Recovery Report - Batch: 720-3277

Method: 8081A Preparation: 3550B

LCS Lab Sample ID: LCS 720-3277/2-A

Client Matrix:

Dilution:

Sold

Date Analyzed: Date Prepared: 1.0

12/20/2005 1228 12/19/2005 1557 Analysis Batch: 720-3372 Prep Batch: 720-3277

Units: ug/Kg

Instrument ID. Varian Pest 2

Lab File ID: N/A

Initial Welght/Volume: Final Welght/Volume.

30.03 g 10 mL

Injection Volume:

Column ID:

PRIMARY

LCSD Lab Sample ID: LCSD 720-3277/3-A

Cilent Matrix: Dilution: Solid 1.0

Date Analyzed:
Date Prepared:

12/20/2005 1259 12/19/2005 15**57** Analysis Batch: 720-3372 Prep Batch: 720-3277

Units: ug/Kg

Instrument ID: Varian Pest 2

Lab File ID: N/A

Initial Weight/Volume: 30.00 g Final Weight/Volume: 10 mL

Injection Volume:

Column ID:

PRIMARY

	Ó	<u>% Rec</u>					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit LC	S Qual I	LCSD Qual
Aidrin	99	101	37 - 136	2	35		
Die drin	101	102	58 - 135	1	35		
Endrin	102	101	58 - 134	C	35		
Heptachlor	99	100	40 - 136	1	35		
4.4'-DCT	100	100	55 - 132	1	35		
gamma-BHC (Lindane)	88	99	37 - 137	1	35		
Surrogate		LCS % Rec	LCSD %	Res	Acceptant	e Limits	
Tetrachioro-m-xylene		91	93		5D - 1	25	
DCB Decaphlorobiphenyl		89	89		46 - 1	42	

Client. Performance Excavators Inc.

Job Number: 720-1025-1

Method Blank - Batch: 720-3289

Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-3289/1-A

Client Matrix: Solid

Dilution: 1.0
Date Analyzed: 12/20/2005 1344 Date Prepared: 12/20/2005 0739

Analysis Batch: 720-3334 Prep Batch: 720-3289

Units: mg/Kg

Instrument ID: Varian ICP Lab File ID: N/A

Initial Weight/Volume: 1 g Final Weight/Volume: 50 mL

Analyte	Result	Qual	ŘL
	ND ND ND ND ND ND ND ND ND ND ND ND ND N	Qual	RL 1.0 1.0 1.0 0.50 0.50 1.0 1.0 1.0 1.0 1.0 2.0 2.0 2.0 1.0
Zinc	ND ND		1.0 1.0

Job Number: 720-1025-1

Client: Performance Excavators Inc

Laboratory Control/

Laboratory Control Duplicate Recovery Report - Batch: 720-3289

Method: 6010B Preparation: 3050B

LCS Lab Sample ID: LCS 720-3289/2-A

Client Matrix

Solid

Dilution.

Date Analyzed: Date Prepared: 12/20/2005 0739

1.0

12/20/2005 1347

Analysis Batch: 720-3334 Prep Batch: 720-3289

Units: mg/Kg

Instrument ID: Varian ICP

Lab File ID: N/A

Initial Weight/Volume: 1 g Final Weight/Volume:

50 mL

LOSD Lab Sample ID: LOSD 720-3289/3-A

Client Matrix

Şolid

Dilution;

1.0

Date Analyzed: 12/20/2005 1351

Analysis Batch: 720-3334 Prep Batch: 720-3289

Units: mg/Kg

Instrument ID: Varian ICP

Lab File ID: N/A

Initial Weight/Volume: 1 g

Final Weight/Volume: 50 mL

Date Prepared: 12/20/2005 0739

	2	Rec					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Quai
Silver	98	98	80 - 120	1	20	en in Leman (en langua de la Arabaca de Paris, en la Arabaca de Paris, en la Arabaca de Paris, en la Arabaca d	elige provinces es en provinción de entre elemente e
Arsenic	101	102	80 - 120	1	20		
Barium	99	100	80 - 120	0	20		
Beryllium	97	98	80 - 120	1	20		
Cadmium	99	99	80 - 120	0	20		
Cobalt	97	98	80 - 120	1	20		
Chromium	69	99	80 - 120	Q	20		
Copper	89	99	80 - 120	1	20		
Iron	98	99	80 - 120	1	20		
Molybdenum	101	102	80 - 120	1	20		
Nickel	88	98	80 - 120	1	20		
Lead	97	98	80 - 120	1	20		
Antimony	93	97	80 - 120	4	20		
Selenium	102	102	80 - 120	O	20		
Thallium	99	100	80 - 120	1	20		
Vanadium	99	100	80 - 120	1	20		
Zinc	98	98	80 - 120	1	20		

Client: Performance Excavators Inc. Job Number: 720-1025-1

Method Blank - Batch: 720-3264

Method: 7471A Preparation: 7471A

Lab Sample ID. MB 720-3264/1-A

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 12/20/2005 1026 Date Prepared: 12/19/2005 1455

Analysis Batch: 720-3304 Prep Batch: 720-3264

Units: mg/Kg

Instrument ID: FIM\$ 100 Lab File ID: N/A

Initial Weight/Volume; 1 g Fina Weight/Volume: 50 mL

Analyte Qua! Result ND Mercury 0.050

Laboratory Control/

Laboratory Control Duplicate Recovery Report - Batch: 720-3264

Method: 7471A Preparation: 7471A

LCS Lab Sample ID: LCS 720-3264/2-A

Client Matrix;

Solid

Dilution

1.0

Date Analyzed: Date Prepared:

12/20/2005 1027 12/19/2005 1455 Analysis Batch: 720-3304 Prep Batch: 720-3264

Units: mg/Kg

Instrument ID: FIMS 100

Lab File ID: N/A

Initial Weight/Volume:

Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-3264/3-A

Client Matrix:

Solid

Dilution: 10

12/20/2005 1028 Date Analyzed: Date Prepared

12/19/2005 1455

Analysis Batch: 720-3304

Prep Batch: 720-3264

Units: mg/Kg

Instrument ID: FIMS 100

Lab File ID: N/A

Initial Weight/Volume: 1 g

Final Weight/Volume: 50 mil

% Rec. Analyte RPD LÇ\$ LÇSD Limit RPD Limit LCS Qual LCSD Qual Mercury 102 101 85 - 115

DR CHANGE BLENED BLOWN A DEDD BENED INCOMED BY CONTROL OF THE STANDARD BLOWN A DEDD BENED INCOMED BY ARTHUR A DEDD BENED INCOMED BY ARTHUR A DEDD BENED BY ARTHUR BY A	Project Info. Sample Receipt Project Name: Fridestit. 408 Fresh Spata: Curlin Canist: Cu	REPORT TO ANY PREPARATION AND THE STATE STATE OF THE STAT	
Lord Lese 19/15/05	Herisapshad by Theresian Theres	X ATEPH EPA SOISMY X STICE CO. Phone: 1220 Quarry Lane C. (925) A 84-19 19 A 84-19 A 84-19 19 A 84-19 19 A 84-19 III A 84-19 II A 84-19 III	
Nesseiged by Sejnebline Nejnebline Nemed Name Date Company		PROBLEM OF EPA 5081 C 608 AD C C C C C C C C C C C C C C C C C C	stice Se, Mr, Se Ag
That was have been some some some some some some some some	3) Rollinguished by: Suprasure Time Results Printed Mathe Out	D ph (24) had fine fix H ₂ O) O Spec Cost D Axadrity D 735 C 705 D Aniens: OO C 30, C NO, OF OB F C NO, C PO. Page 10, 24, July 10310 and 715 (6:0) \$3000 ->1-030	114465

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Performance Excavators Inc.

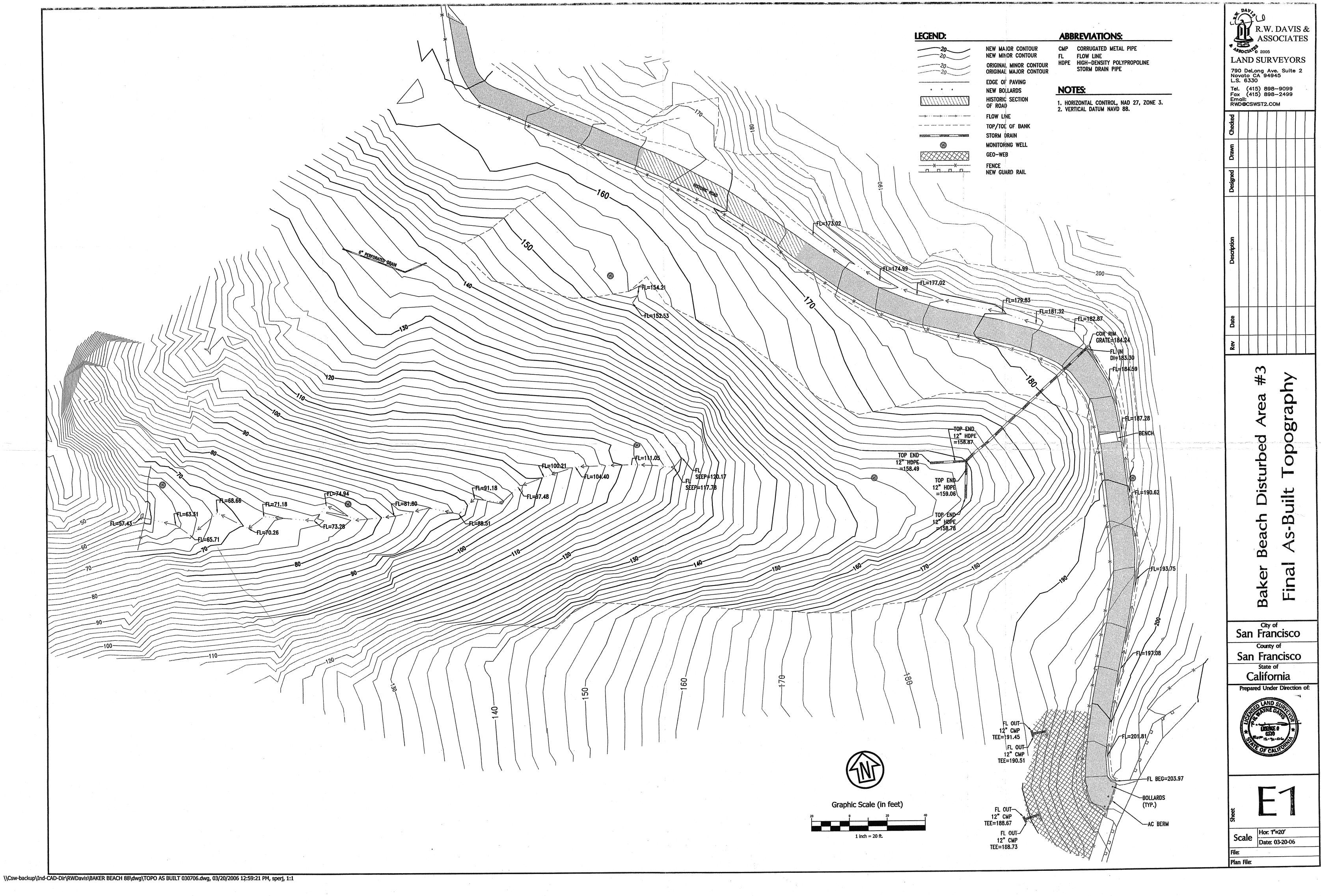
Job Number: 720-1025-1

Login Number: 1025

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present,	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	Faise	COMP 4:1

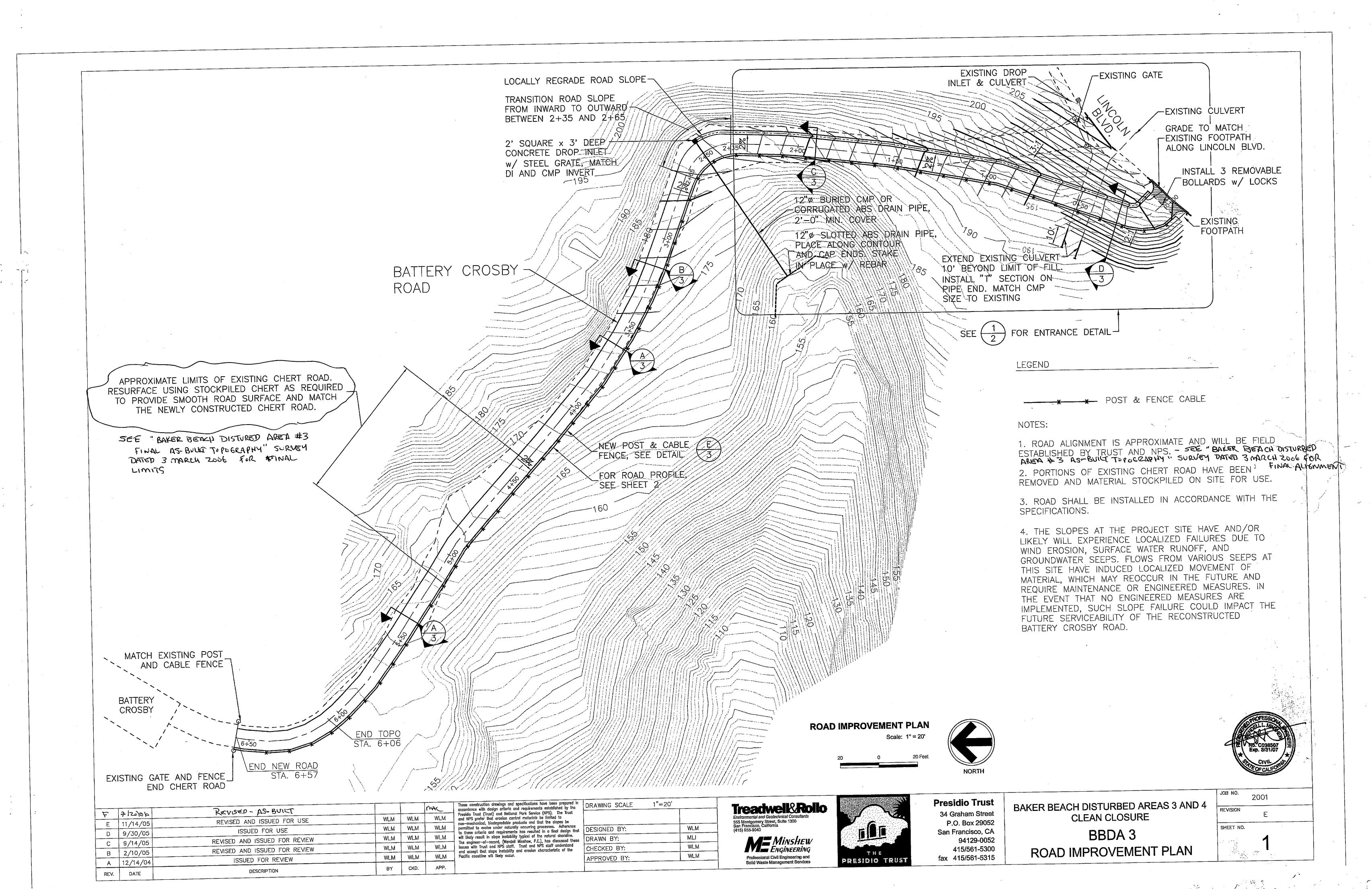
APPENDIX B

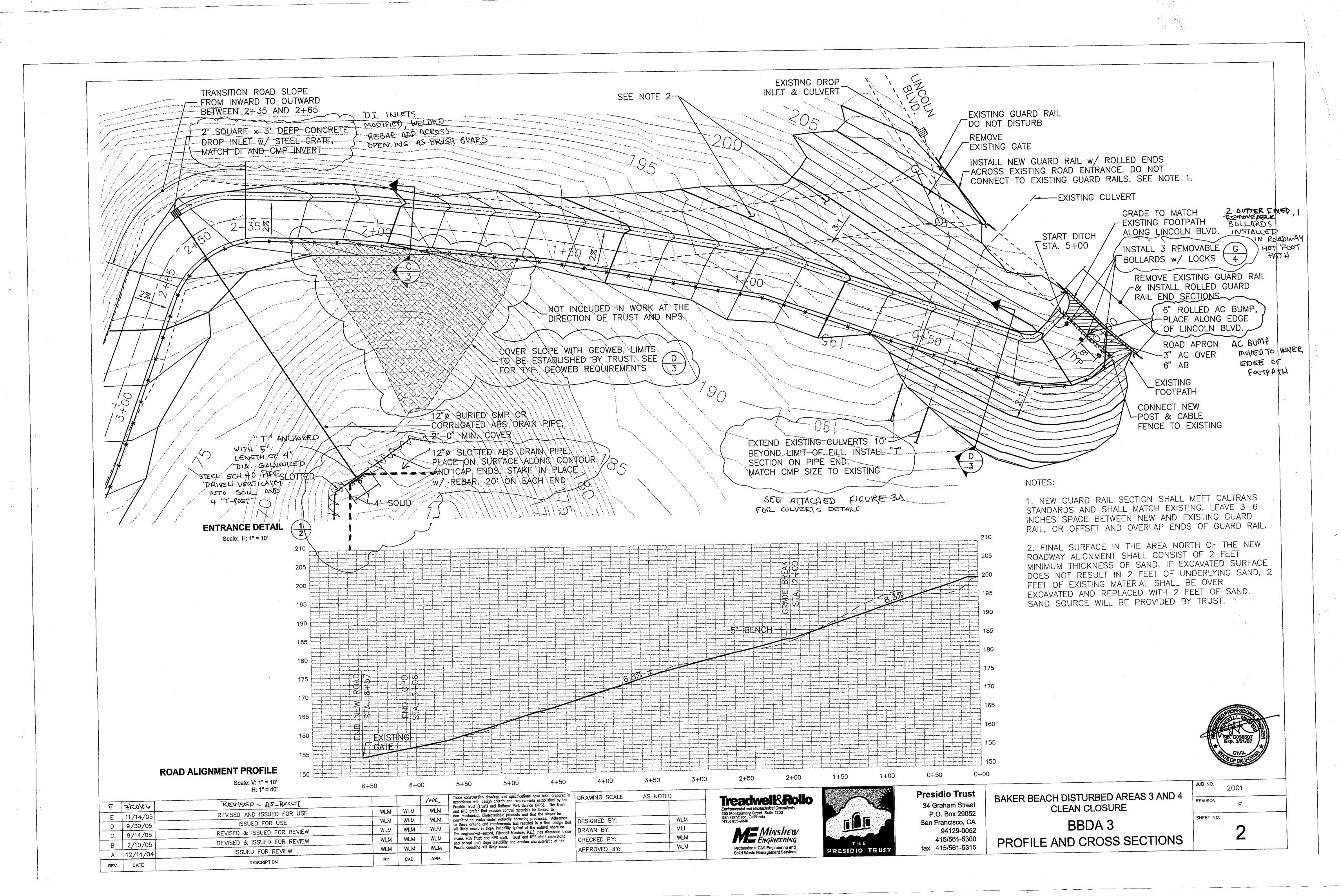
Baker Beach Disturbed Area #3, Final As-Built Topography
(R.W. Davis & Associates, 20 March 2006) and Revised As-Built, BBDA 3 Road Improvement
Plan (Design Drawing As-Builts) (Minshew Engineering and Treadwell & Rollo, revised by
Performance Excavators, 2006)

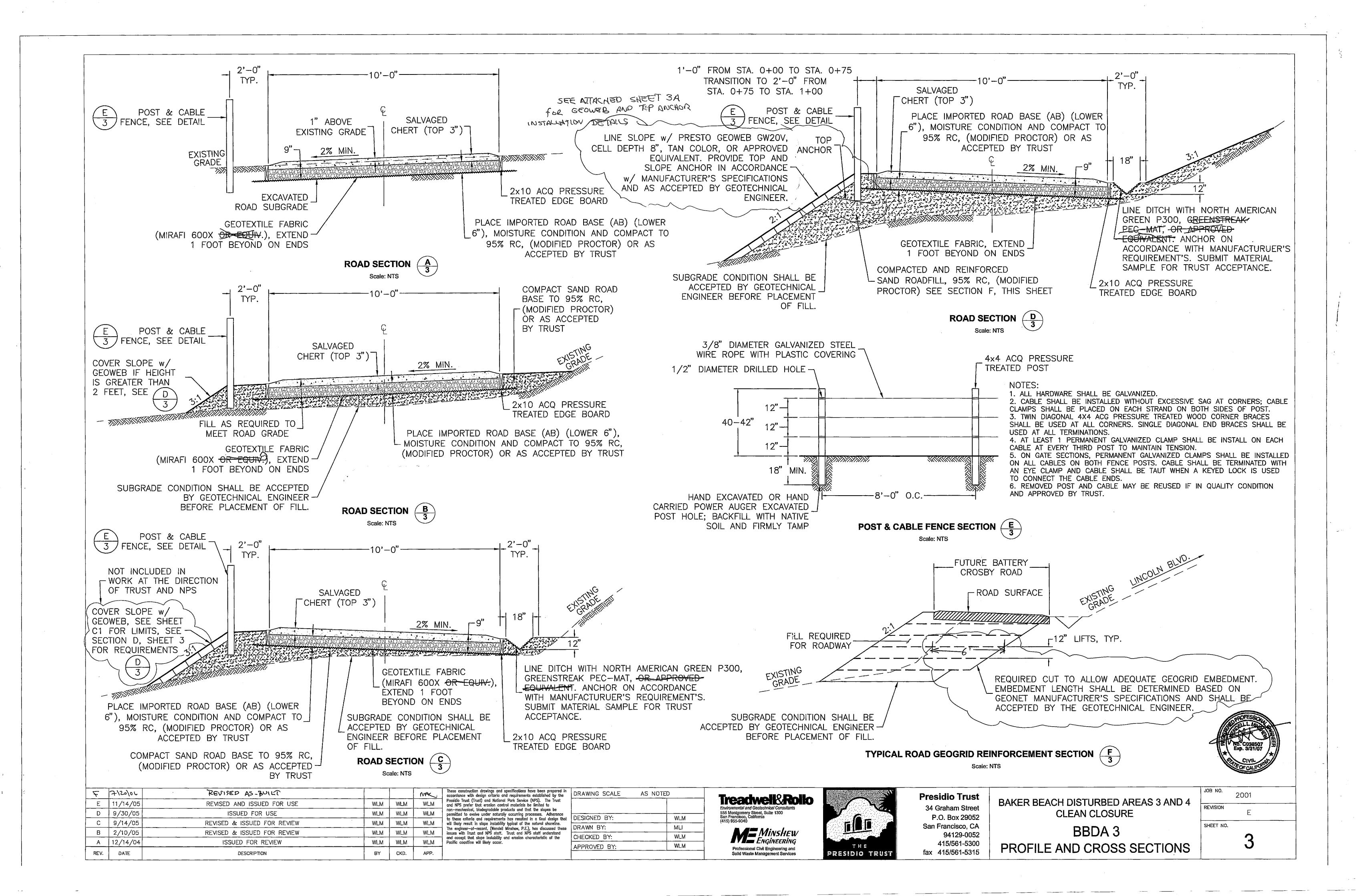


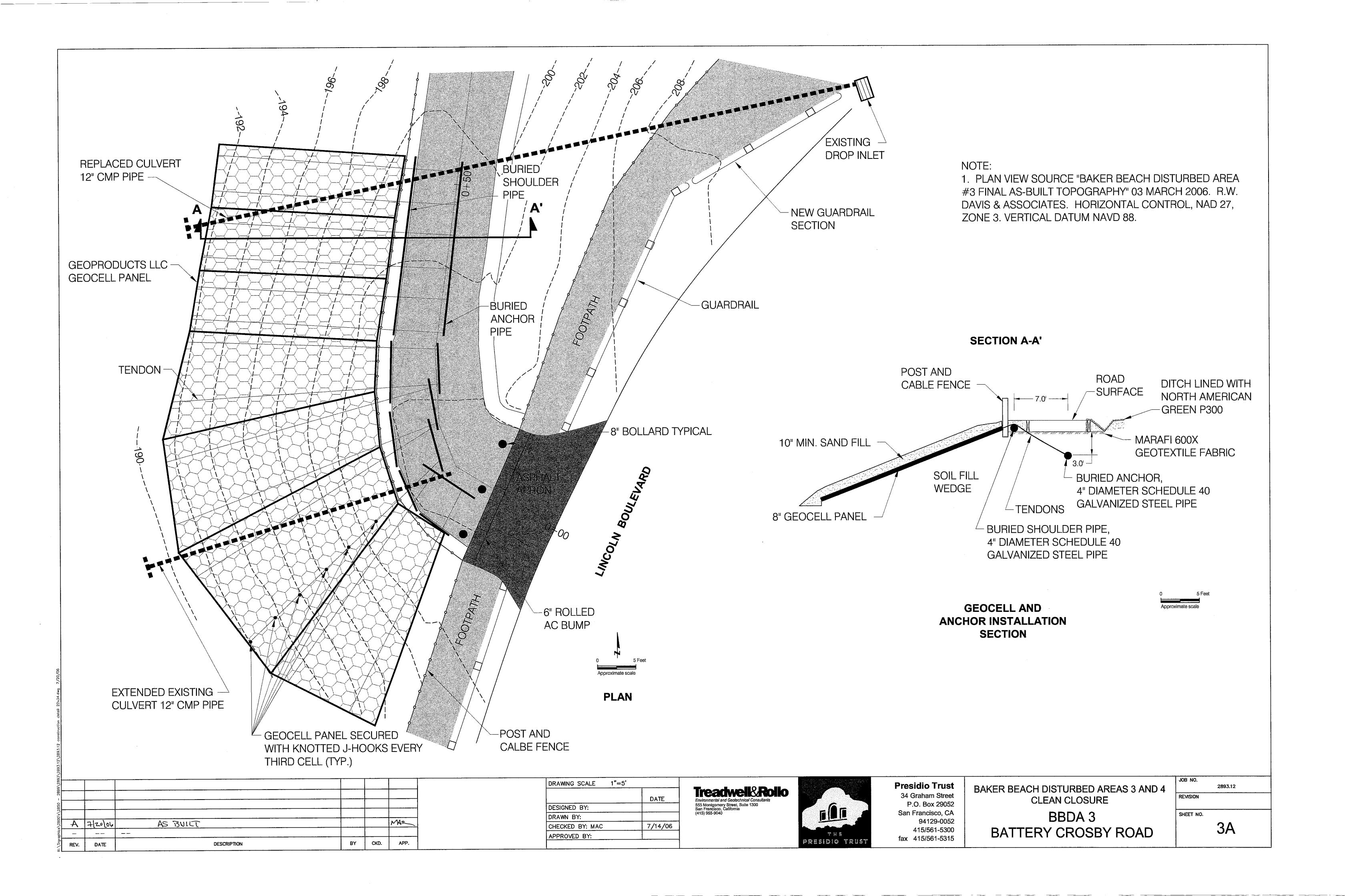
.

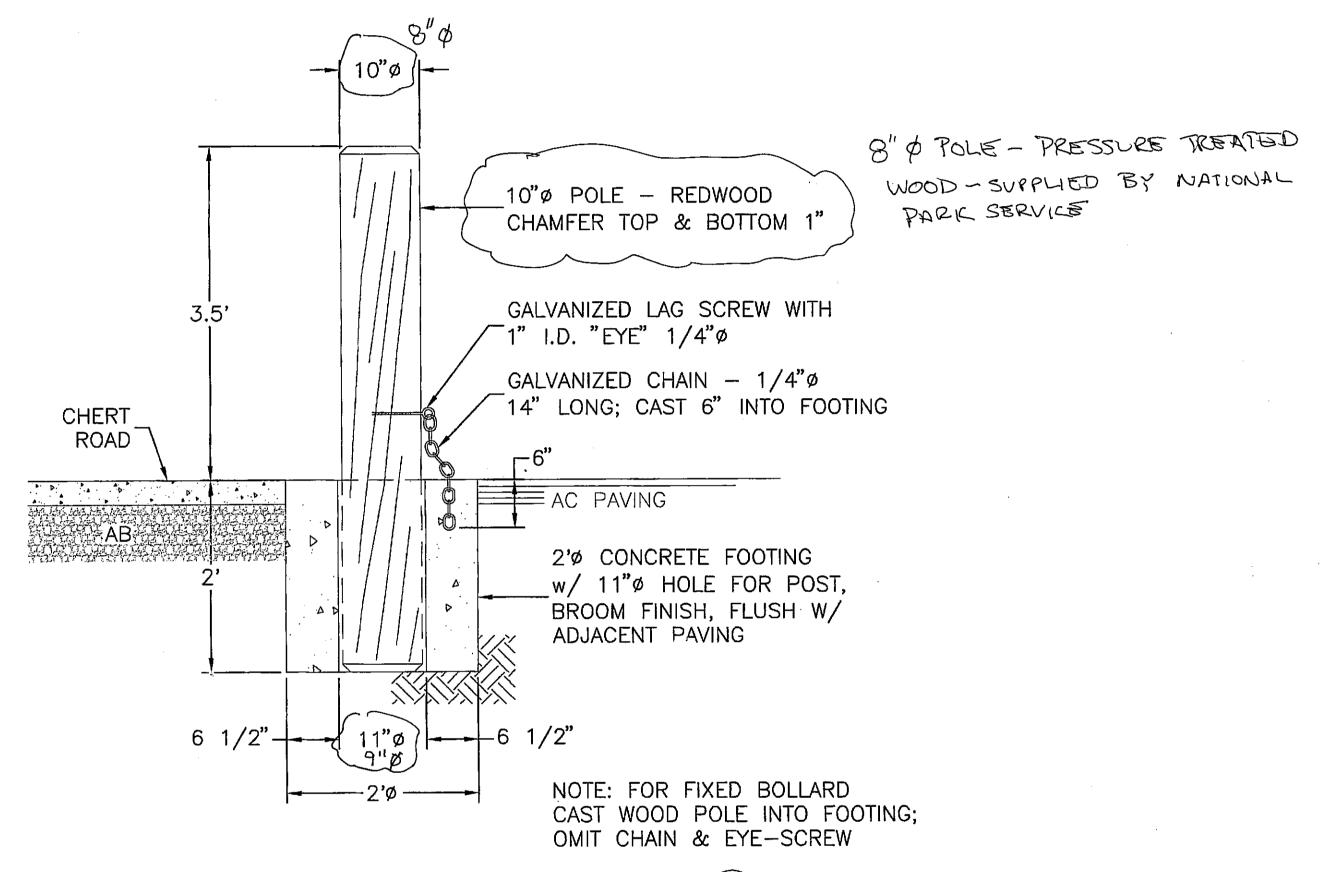
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WOODEN BOLLARD - FIXED & REMOVABLE SECTION
Scale: NTS





臣	7/20/06	REVISED - AS -BUILT			MAC
D	9/30/05	ISSUED FOR USE	WLM	WLM	WLM
С	9/14/05	REVISED & ISSUED FOR REVIEW	WLM	WLM	WLM
В	2/10/05	REVISED & ISSUED FOR REVIEW	WLM	WLM	WLM
Α	12/14/04	ISSUED FOR REVIEW	WLM	WLM	WLM
REV.	DATE	DESCRIPTION	BY	CKD.	APP.

	These construction drawings and specifications have been prepared in accordance with design criteria and requirements established by the	
	Presidio Trust (Trust) and National Park Service (NPS). The Trust and NPS prefer that erosion control materials be limited to non-mechanical, biodegradable products and that the slopes be	
	permitted to evolve under naturally occurring processes. Adherence	1
	to these criteria and requirements has resulted in a final design that will likely result in slape instability typical of the natural shoreline.	
1	The engineer-of-recard, (Wendell Minshew, P.E.), has discussed these	
	issues with Trust and NPS staff. Trust and NPS staff understand and accept that slope instability and erosion characteristic of the	
,	Pacific constline will likely occur.	H
		1
		1

П	DRAWING SCALE	AS NOTED
	DECIONED DV	10/1 2.4
lhat ese	DESIGNED BY: DRAWN BY:	WLM MLI
•	CHECKED BY:	WLM
	APPROVED BY:	WLM
	1	





Pres	sidio Trust					
34 (Graham Street					
Р	P.O. Box 29052					
San	Francisco, CA					
	94129-0052					
	415/561-5300					
fax	415/561-5315					

BAKER BEACH DISTURBED AREAS 3 AND)
CLEAN CLOSURE	

BBDA 3
CROSS SECTION

A	JOB NO.	2001	
7	REVISION	D	
	SHEET NO.		
		4	

APPENDIX C Trucking Waste Manifests Ticket: 827579

15 December 2005 10:01 am 10:01 am



004640

FERFORMINE EXCAUATORS

Vehicle: TRUCK1

OX MOUNTAIN LANGFILL

Reference: 403 Origin: San Francisco Dete / Time: 20.00 ym

Combract: GATE RATE

> Weighmester: OFLANDO

							13
Description 0.	uentity a light l		xtersion 🖑				
DUTTRESS-OLEONFILL 8.	.00 YD	19.00 ×	72.00 Te	rvlerad: W.C	10	408 7	
						400	
Tax			100 E				
		* *	72.00				
Total		₩.	72.00 - r				
10 tal			/ C • OU	hereby certify t	hat this load doe	is not contain a	ny unauthoriz
电影影响的影响。		· 图 · 图 · 图 · 图 · 图 · 图 · 图 · 图 · 图 · 图	THE SALE OF THE SA	racte	可属。 行動的 持续工作会员	5. 数据学的10° 10° 10° 10° 10° 10° 10° 10° 10° 10°	

SIGNATURE: MA FASE ALCA

Ox Mountain Landfill (650) 726-1819 15 December 2005 - 12:19 pm 12419 on 004646 DX POUNTAIN LANDFILL PERFORMANCE EXCAUATORS Defricies TRUCKI Auference: 400 Origin: SAM FRANCISCO Data / Time: 20.00 YD FORWARDS WIF BAIL 408.715 Weighmaster: ORLANDO Description (Alantity AUTTRESS-CLEAR ILL 8,00 - 10 Unit Extension \$22.00 | Tendered: \$0.00 **49.00** 40.00 Taxio \$72.00 £ £2.00 Total sales I hereby certify that this load does not contain any unauthorized waste. SIGNATURE: Ox Mountain Landfill Tirket: 8a7578. (650) 726-1819 👙 15 December 2005 9:58 am 7:58 an 004640 OX HOUMTATH LANUFILL Pereurhance excauaturs Vencie: TRUCKI References 408 408/715 ortionie San Frank ISCO - Oate / Timer 20.00 YD -Contracts Of E. RATE And the large of t Description - Quantity Unite Extension BUTTRESS-CLEAREDL 8.00 YD 49.00 472.00° Tendered: \$0.00 \$0.00 Tax \$72,00 \$72,00 Total I hereby certify that this load does not contain any unauthorized waste. SIGNATURE: _

260-1161

A650459

Sanitary Landfill Inc.

Office (510) 231-4156 Landfill (510) 233-4330 Foot of Parr Boulevard, Richmond, CA 94801

158288 12/08/2005 DATE:

10:05 - 10:19

CUSTOMERS505 / PERFORMANCE EXCAVATORS THE TRAILER: ROUTENA / No. 100

ORIGIN GROUPS / Richmond

TRUCK:

WASTE

LICENSE:

P. O. :

36840 LBS GROSS: TAPE 20440 LBS

NET LEANG LES

PERFOR TRUCKTYPE: NA / Non App The Property of the Pr COMMENT

HAULDUST

QUANTITY UNIT FATE

AMOUNT

TPT / Trash By the Ton-

565, 80

Driver:

Mandatory Fees

Attendant:

I certify that I have not disposed of any liquid or hazardous waste.

West Contra Costa Sanitary Landfill. Inc.

Office (510) 231-4156 Landfill (510) 233-4330 Foot of Parr Boulevard, Richmond, CA 94801

12/13/2005

14:24 - 14:39

CUSTOMER 5505 / PERFORMANCE EXCAVATORS, INC.

ROUTENA / Non App

LICENSE: AY 90358

P.O. GROSS:

39760 LBS

TARE: 19940 LBS NET: 136800 LUS

GRID: COM / Green Wasse Wothe Compost Area

TRUCK TYPE: NA / Non App COMMENT:

HAULDIST

UNIT THE RATE

WASTE

OC / Green Waste - Ton

ORIGIN GROUP! / San Francisco

RERFORMAN

Mandatory Fees

o. oo

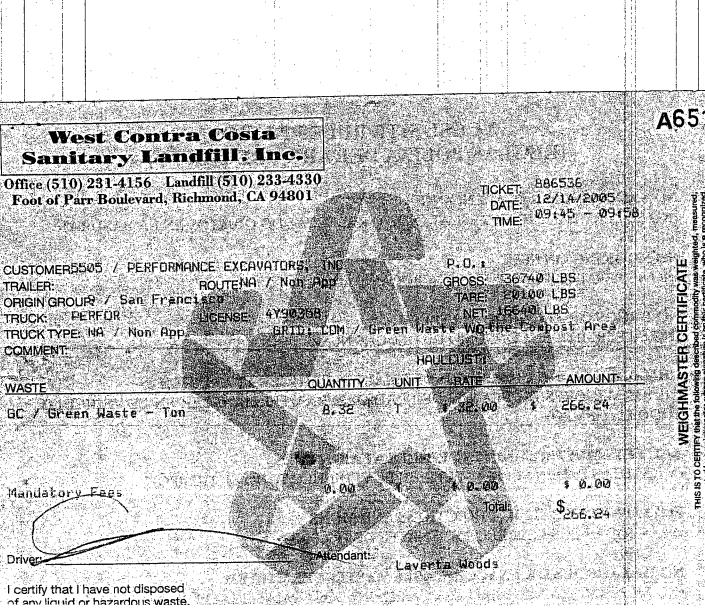
\$ 0.00

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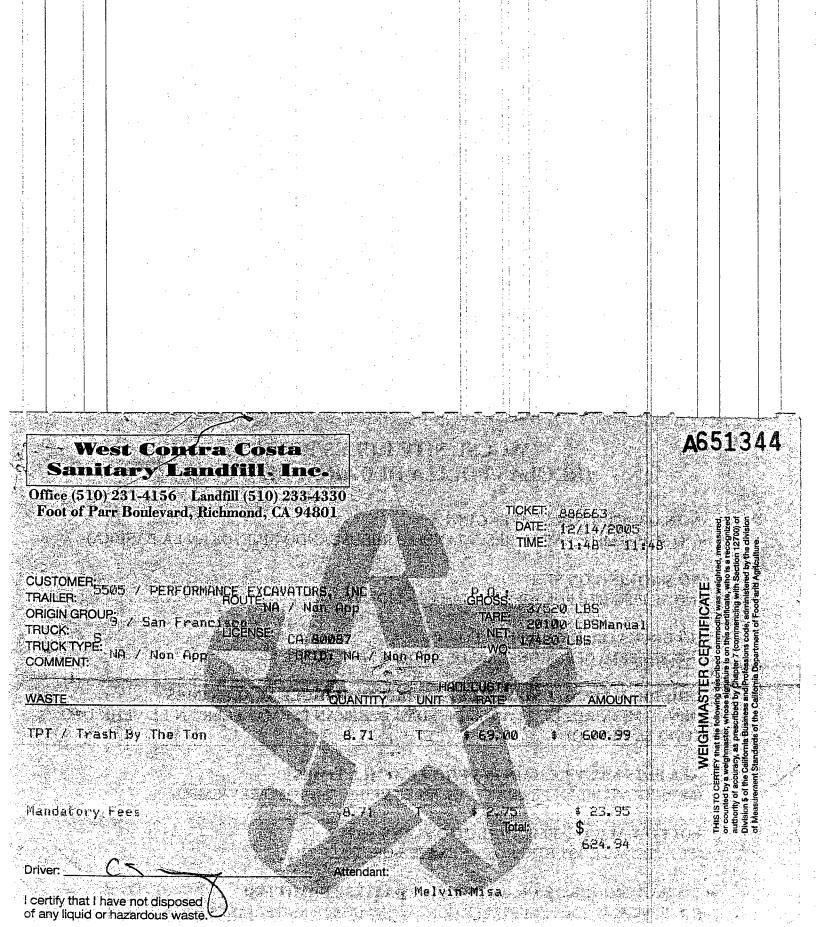
I certify that I have not disposed of any liquid or hazardous waste.

Attendant:





A651287



West Contra Costa Sanitary Landfill

Office (510) 231-4156 Landfill (510) 233-4330 Foot of Parr Boulevard, Richmond, CA 94801

TICKET:

DATE: 897285

TIME: 01/12/2005

13:27 - 13:39

CUSTOMER:

ORIGIN GROUPS / PERFORMANCE EXCAVATORS. INC 9 / San FrancisCENSE

4490258

TRUCK TYPE ERFORMANG

COMMENT: PU / Pick Up Truck / ERID: NA / Non App

28360 LBS NETS 19600 LBS

8560 LRS

TRUCK:

WASTE QUANTITY UNITIAL TRATE: DOUBLE AMOUNT

TPT / Trash By The Ion.

4.28

Mandatory Fees

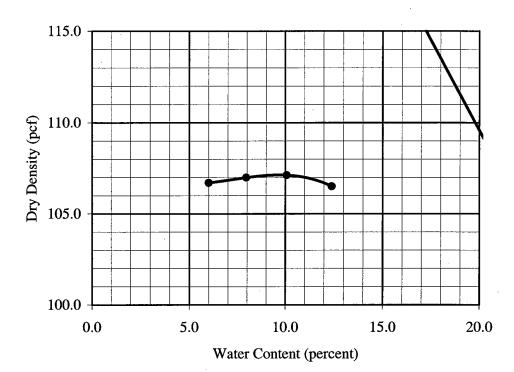
\$ 2. Total:

I certify that I have not disposed. of any liquid or hazardous waste. Attendant:

Nathan Hosford

APPENDIX D Summary of Soil Compaction

COMPACTION TEST RESULTS



			Soil	Data		Test Specifications		
Bulk Sample No. 1 Tested 12/4/05 by EK	LL =	•	ssumed) = /4" sieve =	2.7	ASTM D 1557-00 Procedure A Hammer Weight: 10 lbs			
	Tes	t Data				Hammer Drop: 18 in		
	1	2	3	4	5	Number of Layers: 5		
	13.16	13.24	13.19	13.25		Blows per Layer: 25		
Wt. Mold (lb)	9.39	9.39	9.26	9.26		Comp. Mold Size (ft ³) 0.033		
Wet Wt. Soil + Dish (gm)	800.2	811.9	843.2	680.9				
Dry Wt. Soil + Dish (gm)	761.0	758.5	758.5 774.1 6			Soil Classification		
Wt. Dish (gm)	108.0	87.9	88.0	88.0				
Dish ID Number	Dish ID Number D-2		D-4	D-4		Sand (SP), brown		
Moisture Content (%)	6.0	8.0	10.1	12.4				
Dry Density (pcf)	106.7	107.0	107.1	106.5				
Test Results						Soil Source		
	Uncor	Uncorrected Rock Corrected		orrected				
Maximum Dry Density (pcf)		107 -						
Optimum Moisture Content (%)		10		-				

Client:

TREADWELL & ROLLO

Project Name:

Presidio - Baker Beach 3

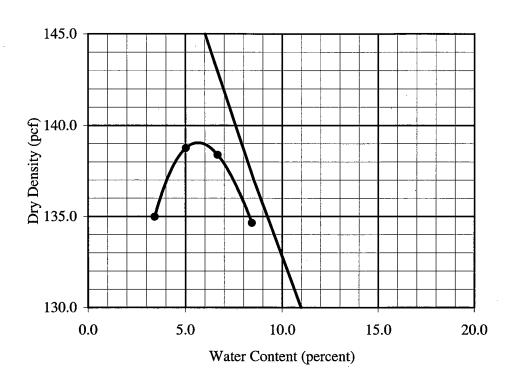
Project Number:

2893.12

GEO ENGINEERING SERVICES

11 Driftwood Court, Pacifica, California 94044 tel 650.359.4260 fax 650.359.2911

COMPACTION TEST RESULTS



Sample Identification			Soil	Data		Test Specifications			
Bulk Sample No. 2 Tested 12/4/05 by EK	LL = PI =		ssumed) = 2 4" sieve =	2.7	ASTM D 1557-00 Procedure C Hammer Weight: 10 lbs				
	T _. es	t Data				Hammer Drop: 18 in			
	1	2	3	4	5	Number of Layers: 5			
Wt. Mold + Soil (lb)	24.68	25.14	25.28	25.16		Blows per Layer: 56			
Wt. Mold (lb)	14.21	14.21	14.21	14.21		Comp. Mold Size (ft ³) 0.075			
Wet Wt. Soil + Dish (gm)	1169.2	1050.5	1035.5	1079.6					
Dry Wt. Soil + Dish (gm)	1134.9	1005.5	975.5	1002.5		Soil Classification			
Wt. Dish (gm)	132.3	109.9	74.8	88.2					
Dish ID Number	D-16	D-10	D-35	B-18		Gravel with Sand and Silt (GP-GM), gray			
Moisture Content (%)	3.4	5.0	6.7	8.4					
Dry Density (pcf)	135.0	138.8	138.4	134.6					
Test Results						Soil Source			
	Uncor	rected	Rock Co	rrected					
Maximum Dry Density	139								
Optimum Moisture Conte	5	.5		•					

Client:

TREADWELL & ROLLO

Project Name:

Presideo - Baker Beach 3

Project Number:

2893.12

GEO ENGINEERING SERVICES

11 Driftwood Court, Pacifica, California 94044 tel 650.359.4260 fax 650.359.2911

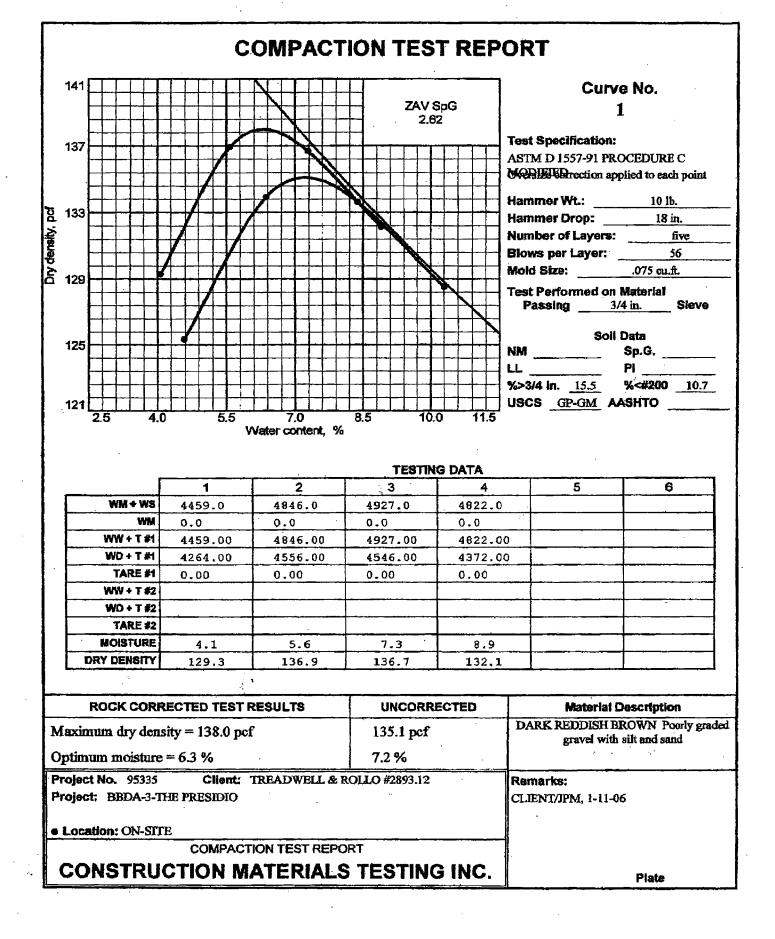


Table D-1 Summary of Field Density Tests Baker Beach Disturbed Area 3

Presidio of San Francisco. California

Test Number	Date	Location	Elevation/ Depth (Feet MSL)	Material	Dry Density (pcf)	Moisture Content (Percent)	Maximum Dry Density (pcf)	Relative Compaction (Percent)	Required Compaction (Percent)	Comments
1	12/16/2005	Sta. 0+30 20' W of CL	186 +/-	Dune Sand	105	12	107	98	95	
2	12/16/2005	Sta. 0+35 18' W of CL	186 +/-	Dune Sand	107	10	107	100	95	
3	12/21/2005	Sta. 0+20 13' W of CL	187.5 +/-	Dune Sand	105	12	107	98	95	
4	12/21/2005	Sta. 0+35 14' W of CL	187.5 +/-	Dune Sand	104	10	107	97	95	
5	1/4/2006	Sta. 0+15 10' W of CL	189.0 +/-	Dune Sand	105	12	107	95	95	
6	1/4/2006	Sta. 0+45 10' W of CL	189.0 +/-	Dune Sand	104	10	107	95	95	
7	1/5/2006	Sta. 0+15 5' W of CL	190.5 +/-	Dune Sand	106.3	10	107	98	95	
8	1/5/2006	Sta. 0+45 5' W of CL	190.5 +/-	Dune Sand	102	10	107	95	95	
9	1/5/2006	Sta. 0+15 CL	192.0 +/-	Dune Sand	103	10	107	96	95	
10	1/5/2006	Sta. 0+20 CL	193.5 +/-	Dune Sand	104.1	10	107	97	95	
11	1/9/2006	Sta. 3+00 CL	fsg +/-	Chert	128.2	8.8	135.1	95	95	
12	1/9/2006	Sta. 3+50 CL	fsg +/-	Chert	129.7	10.2	135.1	96	95	
13	1/9/2006	Sta. 4+25 CL	fsg +/-	Chert	125.5	10.4	135.1	93	95	Fail, see Test 15
14	1/12/2006	Sta. 2+75 CL	fsg +/-	Chert	128.5	10	135.1	95	95	
15	1/12/2006	Sta. 4+50 CL	fsg +/-	Chert	129	9.2	135.1	95	95	Retest of Test 13
16	1/17/2006	Sta. 4+25 CL	fgab +/-	AB	132	6.1	139	95	95	

Table D-1 Summary of Field Density Tests Baker Beach Disturbed Area 3

Presidio of San Francisco. California

Test Number	Date	Location	Elevation/ Depth (Feet MSL)	Material	Dry Density (pcf)	Moisture Content (Percent)	Maximum Dry Density (pcf)	Relative Compaction (Percent)	Required Compaction (Percent)	Comments
17	1/17/2006	Sta. 3+50 CL	fgab +/-	AB	132	5.7	139	95	95	
18	1/17/2006	Sta. 3+00 CL	fgab +/-	AB	131.7	5.7	139	95	95	
19	1/17/2006	Sta. 2+35 CL	fgab +/-	AB	125	6.5	139	90	95	Pumping; Fail, see Test 23
20	1/17/2006	Sta.0+75 CL	fgab +/-	AB	132.2	7	139	95	95	
21	1/17/2006	Sta. 1+25 CL	fgab +/-	AB	137.9	6.5	139	99	95	
22	1/17/2006	Sta. 1+75 CL	fgab +/-	AB	131.5	6.6	139	95	95	
23	1/17/2006	Sta. 2+25 CL	fgab +/-	AB	133	5.8	139	96	95	Retest of Test 19
24	2/16/2006	Sta. 0+35 CL	fsg +/-	Dune Sand	105	9	107	98	95	
25	1/16/2006	Sta. 0+25 CL	fsg +/-	Dune Sand	106	10	107	99	95	
26	2/16/2006	Sta. 0+05 CL	fgab +/-	AB	131.8	7.2	139	95	95	
27	2/16/2006	Sta. 0+25 CL	fgab +/-	AB	132	7.3	139	90	95	

Notes

Feet MSL - Feet above mean sea level

pcf - Pounds per cubic feet

Sta.- Roadway Station

CL - Center Line

fsg - Final subgrade

fgab - Final grade of Aggregate base

AB - Aggregate base